This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

Google™ books

https://books.google.com

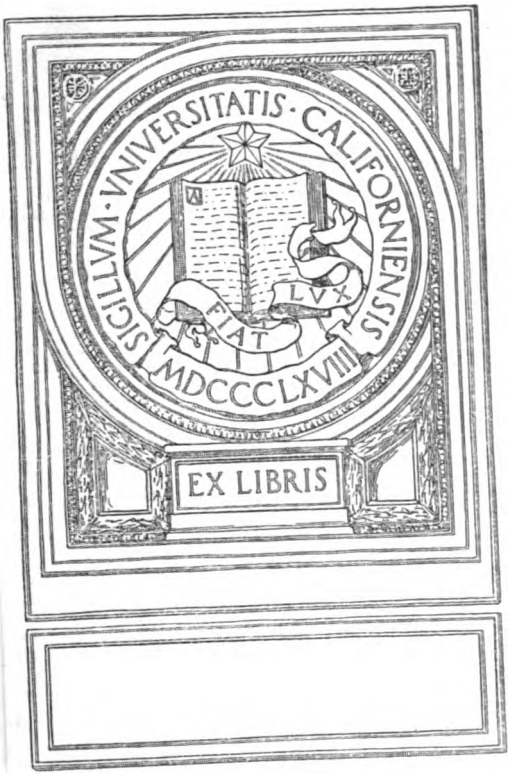
VERBA · VOLANT · SCRIPTA · MANENT

W. H. SMITH & SON'S
LIBRARY
Head Office: STRAND HOUSE
LONDON, W.C.2
Branches throughout the Country

This book may be
borrowed by Subscribers
as an extra volume and by
Non-subscribers through
THE DAY-BY-DAY
SERVICE

2d up to five days
½d per day thereafter

Digitized by Google



Digitized by Google

Digitized by Google

A SEARCHLIGHT ON THE NAVY

Digitized by Google

Also by Hector C. Bywater

NAVIES AND NATIONS

Spectator: "A book plainly outweighing in importance anything else of the kind that has appeared in recent years. Mr. Bywater ought to secure a wide public. Members of Parliament should not leave him unread."

SEA POWER IN THE PACIFIC

Maps and Charts

Morning Post: "All thinking men and women would do well to read Mr. Bywater's book, in which he discusses with admirable frankness and great lucidity the naval problems of that ocean. . . . A standard work of reference. . . . A book of absorbing interest."

THE GREAT PACIFIC WAR

Maps

Punch: "A serious study, as conceived by a real expert on the subject, of the probable course of the campaign in the event of an armed clash within the next few years between the United States and Japan. . . .

"The volume has a fascination all its own and conveys an amazing impression of historic truth."

THEIR SECRET PURPOSES

Dramas and Mysteries of the Naval War

With a Chart

Sunday Times: "Powerfully written and evidently aims at a wide rather than a specialised audience. Mr. Bywater is not only an authority on naval affairs but has had personal experience of Intelligence work, and he demonstrates clearly that the Admiralty was well informed of what was going on behind the veil of secrecy which the Germans believed to be impenetrable."

By Hector C. Bywater and H. C. Ferraby

STRANGE INTELLIGENCE

Memoirs of Naval Secret Service

Map

Manchester Guardian: "This book sets forth with expert knowledge the real methods of work and achievements of particular Secret Service men—sometimes in their own personal narratives, which often develop unexpected turns of events and tense moments undreamed of in fiction."

Digitized by Google

A SEARCHLIGHT ON THE NAVY

BY

HECTOR C. BYWATER

Associate of Inst. Naval Arch.; Life Member and Gold Medallist (1926) *of U.S. Naval Inst.*

CONSTABLE & CO LTD
LONDON

Digitized by Google

VA 1/51
B9

PUBLISHED BY
Constable and Company Ltd.
LONDON

•

Oxford University Press
BOMBAY CALCUTTA MADRAS

•

The Macmillan Company
of Canada, Limited
TORONTO

TO MY
MOTHER

First published . . 1934

Printed in Great Britain
BY RICHARD CLAY AND SONS, LIMITED,
BUNGAY
Suffolk

Digitized by Google

PREFACE

THIS book has been written to state the case for a British Navy strong enough to deter would-be breakers of the peace and, in the worst event, to safeguard the communications of the Empire, including those which form this country's bread line. Every study of modern defence problems must take into consideration the air menace. This I have tried to deal with objectively.

Many cruises in ships of the Royal Navy, a recent official visit to the fleets and naval establishments of France and Italy, and inspections of United States, German, and other foreign warships have provided first-hand material for several of the chapters that follow.

To the Editor of the *Daily Telegraph* (London) and to the Editor of *Current History* (published by the *New York Times*) my thanks are due for permission to reproduce, either textually or in substance, certain of my contributions to their columns. I have also to acknowledge the courtesy of the Board of Control, United States Naval Institute, in permitting me to reprint, in an amended form, my essay on the battleship and its uses which originally appeared in the *Proceedings* of the Institute.

Digitized by Google

Captain W. H. Thring, C.B.E., R.N., who as Chief of the Australian Naval War Staff before and during the Great War has an intimate knowledge of Pacific problems, has generously placed at my disposal some notes of his on this highly important subject. These have been embodied in Chapter XV, which, thanks to Captain Thring's collaboration, provides, I venture to think, a valuable commentary on our position in the Far East.

To my friend Mr. H. C. Ferraby I am indebted for helpful suggestions in the final preparation of the book.

HECTOR C. BYWATER.

London,
August, 1934.

Digitized by Google

CONTENTS

CHAP.		PAGE
I.	THE INTERNATIONAL NAVAL SITUATION OF TO-DAY	1
II.	WHAT NAVAL LIMITATION MEANS TO THE TAXPAYER	21
III.	THE BRITISH NAVY IN ECLIPSE	34
IV.	BIG SHIPS OR SMALL?	52
V.	"TIN-CLADS" AND CONVOY	73
VI.	DESTROYERS AND SUBMARINES	94
VII.	THE NAVY'S FUEL IN PEACE AND WAR	113
VIII.	NAVAL OFFICERS IN THE MAKING	136
IX.	BRITAIN'S BLUNDER AT WASHINGTON	155
X.	EFFECTS OF ONE-SIDED DISARMAMENT	172
XI.	SEA AND SKY: BRITAIN'S CLIPPED WINGS	190
XII.	THE WRONG SORT OF NAVAL TREATY	204
XIII.	NEW METHODS OF NAVAL LIMITATION	222
XIV.	IN DEFENCE OF THE BATTLESHIP	240
XV.	PROBLEMS OF THE PACIFIC	265
XVI.	BRITAIN AND THE CONTINENTAL FLEETS	282
	APPENDICES	300
	INDEX	306

Digitized by Google

Digitized by Google

CHAPTER I

THE INTERNATIONAL NAVAL SITUATION OF TO-DAY

SOON after these lines appear in print the five leading maritime Powers will again foregather to discuss the limitation of their respective naval armaments. Preliminary conversations between them began in the summer of 1934, for it was recognised that unless the ground was prepared beforehand the forthcoming conference must inevitably fail. And failure might be serious. The whole question of world disarmament has reached a critical, perhaps a crucial stage, and upon the decisions taken in the near future may depend not merely the continuation or end of the system of regulating combatant forces by negotiation, but the maintenance of peace itself.

So far as the naval problem is concerned the conditions now obtaining are fundamentally different from those of 1921, when the Washington Conference was held. Fourteen years ago the only three Powers that counted at sea were the British Empire, the United States, and Japan. The first possessed a fighting fleet of overwhelming strength, though part of it was obsolescent; the second and third were engaged in a neck-and-neck building race which, had it been run to finality, would have left them practically equal in modern battleship

Digitized by Google

tonnage. But the pace was too hot to last. To the American taxpayer the naval race was becoming decidedly irksome; to the Japanese taxpayer it was ruinous. It is not disrespectful to say that France and Italy hardly counted at that time, when the battleship was the only court card and super-dreadnoughts were the only trumps.

Passing over the abortive parley at Geneva in 1927, where, as we now know, foreign armament firms held statesmanship fast in a clove hitch, we come to the London Conference of 1930. It began as a five-power meeting, but at the critical moment France and Italy withdrew, and the treaty that eventually emerged was confined to the "Big Three." This was the first break-away from the cardinal principle that disarmament, to be effective, must be universal. The only reason why any sort of agreement was reached in 1930 was that Great Britain had a Socialist Government which was anxious for party purposes to achieve a spectacular coup in the realm of high politics. To accomplish this they were prepared to go to almost any length in the making of concessions, and they did, in fact, give away British naval assets with both hands without receiving, or even demanding, a satisfactory *quid pro quo*.

By an overwhelming majority of Britons the London Naval Treaty is now condemned as an inexcusable blunder, the consequences of which cannot yet be measured. It is a mistake never likely to be repeated. At the next naval con-

Digitized by Google

ference Great Britain may be trusted to drive a hard bargain in exchange for any further reduction that she may be invited to make in her depleted sea forces.

The comparatively facile success of the Washington Conference seems to have led many people on both sides of the Atlantic to assume that competition in naval armaments had been permanently arrested. They did not pause to consider the quite exceptional circumstances in which it was held. So far as the European Powers were concerned, war weariness and the threat of insolvency put them in the mood to accept any arrangement which promised to ease the burden of armaments without unduly jeopardising their security; and even in America and Japan there was an incipient revolt against the lavish expenditure on battleships. It was, therefore, not a very difficult matter to draft a treaty for the limitation of these costly weapons.

But at the first attempt to extend similar restrictions to smaller and cheaper fighting craft, including submarines, trouble was encountered. On this point no agreement could be reached, nor have negotiations during the subsequent years succeeded in ending the deadlock.

Since the Washington Conference political events have occurred in various parts of the world which have changed the whole aspect of naval disarmament. In 1922 the Fascist revolution reinstated Italy as a great Power and incidentally gave a new

Digitized by Google

turn to her naval policy. In the same year the first French post-War shipbuilding programme was introduced, the precursor of the famous Naval Statute which has already restored the navy of France to its traditional plane of importance. In 1924 the British Parliament authorised five new cruisers to replace obsolete units. They were of the heavy class, armed with 8-in. guns, to which the Washington Conference had given its benediction. Japan had already adopted this type and in 1924 had six such vessels on the stocks.

That year, too, witnessed the American–Japanese controversy on Asiatic immigration, which seriously disturbed the harmonious relations that were supposed to have been established at the Washington Conference. It may have been a mere coincidence, but the fact is on record that this dispute was followed by an energetic development of Japanese naval armaments, over twenty new vessels being started in the ensuing twenty months.

Meanwhile, the rapid expansion of the French and Italian navies, coupled with Japanese activities, impelled Great Britain to embark upon a systematic rebuilding of her fleet. In 1925 Parliament voted a five-year programme embracing sixteen 8-in. gun cruisers and many smaller craft. This project was never completed, eight of the cruisers being cancelled at later dates as a disarmament " gesture."

To-day all parties in Britain except the Socialists and a handful of Liberals are definitely opposed to further reduction in the strength of the Navy.

Digitized by Google

The apathy which prevailed for more than ten years after the War has given place to a keen public interest in matters of defence. The preparations for celebrating " Navy Week " in 1934 on a scale never previously attempted, the increase in the current Navy budget, the addition of 2,000 to the personnel of the fleet and the decision to build heavier cruisers capable of holding their own against the best foreign ships—all these are symptoms of a return to a strong and purposeful naval policy, solidly backed by public opinion. It looks as if there are to be no more sentimental gestures involving sacrifices without compensation, no further experiments in unilateral disarmament.

To arrive at a clear understanding of the current naval situation it is necessary to review in some detail the problems and policy of each of the five Powers chiefly concerned. It will be convenient to begin with Great Britain. Her position is unique, for not only is she an island which depends on the sea for sustenance, but she is the head and heart of a vast commonwealth scattered over the globe, each member of which looks to her for protection and security. None of the overseas members of the commonwealth is capable of defending itself against serious aggression. An empire of this magnitude is necessarily vulnerable at many points, and while every war has its decisive theatre, no war is conceivable in which Great Britain could safely concentrate the whole of her naval strength in one area. That is why the

Digitized by Google

acceptance of a one-Power standard of strength is bound to entail risk.

As for the functions of the British Navy, they were tersely defined by the First Lord of the Admiralty in a recent speech. "Every day 110,000 tons of merchandise and 50,000 tons of food reach the shores of Great Britain from overseas. They come over 80,000 miles of sea routes, and unless we secure their safe arrival we starve. The protection of our sea routes, for the safe arrival of our merchandise and our food, is the business of the Navy."

The British people have not forgotten that in the summer of 1917, when the German U-boat campaign was at its height, there remained in this country only six weeks' supply of food. No other country in the world is so exposed to the threat of sudden starvation in war.

Leaving out the United States, there are at least four Powers whose naval armaments must be a matter of vital concern to Great Britain. Japan is in a position to conquer our Far Eastern possessions, paralyse our trade in that zone, and menace Australia and even India. Were trouble to develop with that country we should have to wage a naval campaign 10,000 miles from our home bases.

France, with three times as many submarines as Germany possessed in 1914, a score of high-speed cruisers, and numerous ports on the Channel, Atlantic, and Mediterranean which it would be quite impossible to blockade, is in an

Digitized by Google

ideal position to sever our lines of communication and reduce us to famine.

Italy, almost equally well equipped with submarines, cruisers and aircraft, would have no great difficulty in closing the Eastern Mediterranean to British shipping, an act that would cause freights to soar and speedily compel us to go on short rations.

Germany has a small but highly efficient navy, the rapid expansion of which is believed to be only a question of time. Even to-day her "pocket battleships" and cruisers, with a sea endurance of 15,000 to 20,000 miles, could play havoc on the trade routes, and it is for us a disconcerting fact that there are only three British warships capable of dealing with the pocket battleship type. Nor is it any secret that Germany has laid her plans for the mass production of submarines, if or when she requires them.

The naval policy of the United States is apt to bewilder the foreign observer. He is intelligent enough to realise that a great Power, the wealthiest in the world, with an immense seaboard fronting two oceans and a foreign trade to the expansion of which there is no visible limit, must of necessity have a navy of the first class. Obviously, the dimensions of that navy must be determined by the United States alone, subject to such international agreements as it may see fit to endorse. Nothing, one imagines, could be more exasperating to the patriotic American than foreign attempts to

Digitized by Google

suggest, if not to dictate, the limits to which the United States Navy should be developed.

Nevertheless, it is true that the United States, if called upon to state its reasons for demanding a navy second to none, would have to appeal to academic rather than to concrete principles. Separated from Europe and Asia by the width of oceans, it is in no danger of direct attack on a serious scale, nor could it be blockaded in any literal sense of the word. The Philippines are a dangerous liability so long as they remain under the American flag, but the proposed grant of independence to those islands and the consequent withdrawal of the Asiatic Squadron would close the only gap in the naval defences of the United States, which would then be invulnerable. Henceforth Washington could view the development of Japanese, French, Italian, and even of British, sea power with Olympian calm and detachment, though considerations of prestige might still justify the maintenance of a United States fleet second to none.

This rather provocative statement is made deliberately. In the past the United States has exhibited a tendency to fashion its own "yard-stick" of international naval armaments and to become annoyed when other parties looked askance at the suggested system of rationing tonnage. It is advisable, therefore, to say quite frankly that a nation which is singularly free from the threat of attack is not necessarily the best judge of the defensive requirements of less-favoured countries.

Digitized by Google

The British Empire, Japan, and Italy, and France in less degree, could one and all be subjugated and forced to surrender in months, if not weeks, by the pressure of superior sea power. In no imaginable circumstances could the American nation be brought to its knees by similar means.

Probably under the delusion that all naval competition had been ended by the Washington treaty, the United States for several years thereafter made no addition to its fleet. During the same period, however, all the other treaty Powers were steadily reinforcing their armaments at sea, Great Britain being the last to join in. Soon, therefore, the United States found its relative strength declining. There followed an outcry against the other Powers for starting a new naval race, though in fact, by systematically restoring their depleted fleets, they were only obeying the instinct of self-preservation. Each was scrupulously observing the Washington treaty rules and none made any attempt to exceed its legal quota in the categories of restricted tonnage.

Eventually, of course, the United States also had to resume building. Six heavy cruisers were begun in 1928, and authority was obtained for a larger programme in the event of further disarmament negotiations proving futile. Finally, in 1930, the London treaty established definite quotas for all classes of naval tonnage in the case of Britain, the United States, and Japan, but as France and Italy stood aloof, this arrangement, it was clear, could be

Digitized by Google

only temporary. In consequence, the new treaty was scheduled to expire at the end of 1936.

It was a strangely one-sided compact. While, for example, Britain bound herself not to complete more than 91,000 tons of new cruisers in the period covered by the treaty, no similar obligation was laid upon the United States or Japan. Here, then, is a typical example of the secret diplomacy practised by the British Socialist leaders whose determination to score a party triumph blinded them to the higher claims of national security. As a sop to the Admiralty and to that section of the public which might protest against the uncompensated surrender of naval assets, the " escalator " clause was inserted. This authorises a signatory Power to go beyond its tonnage quota in the event of a neighbouring State, not a party to the pact, becoming a potential menace by reason of excessive naval building. Actually this safeguard is illusory, since invocation of the clause in question would invite a dangerous crisis.

Suppose, for instance, that Great Britain, finding that both France and Italy had doubled their submarine fleets since the treaty—as indeed they have done—resolved to build an extra 50,000 tons of anti-submarine craft by taking advantage of the escalator clause. As a first step she would have to notify her treaty partners, the United States and Japan, and justify her proposed action by indicting France and Italy as prospective enemies. It would be impossible to keep the ensuing correspondence

Digitized by Google

between London, Washington, and Tokyo a secret, and the effects of the disclosure on Britain's relations with her Continental neighbours may readily be imagined. In 1933 the British Premier told a peace deputation that had professional, *i.e.* Admiralty, advice been taken, the escalator clause would have been invoked in 1932. That this was not done is a tacit admission that as a safeguard the clause is worthless.

As I have remarked, American naval policy is somewhat puzzling to the foreigner. For several years the United States may not lay a single man-of-war keel; then there comes a strenuous publicity campaign to rouse country and Congress, and eventually a big programme of new construction is put in hand. This completed, another prolonged period of inactivity ensues; the relative strength that had been gained is gradually lost, and once more there is hurried building on a large scale to restore the balance. Such a policy inevitably creates a false impression abroad, and it is open to any foreign critic to point to one of these big programmes—such as the NRA measure of 1933 and the Vinson bill of 1934—as evidence that the United States, while preaching the virtues of disarmament to others, is actually inaugurating a new naval race. Intelligent observers know this charge to be unfair, but for propaganda purposes the fact that the United States has authorised over 130 new fighting ships in twelve months can be exploited with telling effect.

Digitized by Google

About Japan's naval policy there is nothing obscure or ambiguous. Its object is so to consolidate her strategic position as to render armed foreign interference in Eastern Asia physically impossible. That goal is now in sight, if it has not already been attained. Japan keeps no warships in foreign waters, nor does she possess overseas bases other than the mandated South Sea Islands. Her whole naval force is concentrated in home waters, where, thanks to geography and a first-class fleet, her position is practically impregnable. Judging from experience, no argument however plausible, no gesture however persuasive, will move her to reduce her naval armament by a single ton or a single gun below the standard which she deems necessary. On the contrary, having obtained a 3–5 ratio of strength at Washington, subsequently increased to 3½–5 at London, she is now demanding "parity in principle" and, by all accounts, will be satisfied with nothing less.

For reasons not wholly apparent to the outer world, Japan professes to regard the year 1935 with grave apprehension. In that year, it is true, the next naval conference is to be held, and almost simultaneously Japan's withdrawal from the League of Nations will become definitive. On the face of it, however, there is nothing to indicate that tragic consequences will follow either event. Japan may, of course, anticipate a demand for the retrocession of the former German islands in the Pacific which she holds under the League's mandate and which

Digitized by Google

are now considered to be important bastions in her rampart of defence. But if such a demand were raised it would probably be a mere formality to save the face of the League, since no one imagines that Japan would comply with it.

As for the naval conference, a Japanese claim to parity would doubtless be resisted by Great Britain and the United States, but even so there would be ample scope for compromise. It is precisely because world naval policies are inherently conflicting that these periodical armament talks are held, the object being to map out a multilateral policy acceptable to all and thus avoid, or at least modify, the frankly competitive shipbuilding which is a danger to peace.

If the reported intention of the United States to evacuate the Philippines and withdraw its naval forces to Hawaii is actually carried out, the principal cause of armament rivalry with Japan will disappear, for the two fleets would then be so far apart as to render battle contact all but impossible. Such a development would materially weaken the Japanese case for a still larger navy, since she would then be left in unchallenged command of the Western Pacific. As every student of strategy is well aware, Japan's mastery of her own waters is already absolute. Nevertheless, the presence of an American squadron at Manila is always a convenient pretext for Japanese big-navy propaganda.

Neither France nor Italy is expected to be an enthusiastic participant in the next naval con-

Digitized by Google

ference. They know that one of its chief objects will be to limit the production of submarines and light surface craft—the very types to which they are most partial. Both declined to accept any restriction on such tonnage at the London parley, and there is nothing to indicate any change in their respective attitudes. Each Power is creating a most formidable submarine fleet, far stronger than that which Germany possessed on the outbreak of the World War. France has (in 1934) 109 boats and Italy 65, the majority of which are of up-to-date design. These totals are sufficient to explain why Great Britain could not in any circumstances agree to an extension of the London treaty in its present form, escalator clause or no escalator clause.

Both in France and Italy naval defence is receiving much more attention than formerly. The first is determined to be mistress of the Mediterranean, mainly because of her vital lines of communication with North Africa, her principal reservoir of military man-power. Further, the renaissance of the German Navy is viewed with growing anxiety and has already prompted France to lay down two 26,500-ton battleships at a cost of more than £6,000,000 apiece. It is typical of the close inter-relationship of naval armaments that this step by France, although directed against Germany, has impelled Italy also to order two battleships. Political conditions to-day are such that the laying of a man-of-war keel almost anywhere is apt to produce repercussions " from China to Peru."

Digitized by Google

As foreshadowed by official statements and unofficial clues, the programmes of the various Powers to be presented at the next naval conference will approximate to the following summary:

The British Empire.—Further reductions of naval armaments must be absolutely conditional on the agreement of all Powers concerned, not merely two or three of them. In other words, unless the three-Power treaty negotiated in London in 1930 can be extended to cover France and Italy, Great Britain will not renew it. Nor will she be disposed to perpetuate the existing ratios of cruiser and other light tonnage without drastic reduction of the French and Italian submarine and light forces. On the contrary, if those forces are to remain at their present strength, Britain will insist on a substantially higher ratio of counter-tonnage.

She advocates a trenchant scaling down in the size and armament of all combatant craft. The battleship standard, now at 35,000 tons and 16-in. guns, should be lowered to 25,000 tons and 12-in. guns, or, subject to corresponding cruiser restriction, it should be cut to 22,000 tons and 11-in. guns. The present cruiser maxima of 10,000 tons and 8-in. guns should be modified to 7,000 tons and 6-in. guns. Battleships and cruisers of these smaller types would, it is claimed, be perfectly competent to perform all reasonable functions. The submarine should be totally abolished, or, alternatively, limited to 250 tons, which would restrict its operations to coastal defence and dis-

Digitized by Google

qualify it to act as a commerce raider on the high seas. Finally, Britain favours some form of control over naval aircraft, which for the present are not restricted by treaty.

The United States is expected to propose a sweeping *pari passu* cut in the strength of all navies concerned, probably by one-third. It is sympathetic in principle to British views on the submarine, but does not desire any reduction in the size or armament of battleships and cruisers, holding that the present standards, which involve heavy building costs, are the best deterrent to unbridled competition, besides being suited to American strategic requirements.

Japan will denounce the Washington–London ratios and demand full parity, in principle, with Great Britain and the United States. The Japanese will insist on the confirmation of Article 19 of the Washington treaty (forbidding development of Pacific insular fleet bases) and will certainly make this a fundamental condition of any new pact. They will urge the total abolition of aircraft-carriers on the ground of their essentially aggressive character.

Japan fears these ships more than any other naval craft. She dreads the possibility of large enemy carriers steaming across the Pacific to send off swarms of bombing 'planes against Tokyo and other populous centres, where heavy-calibre bombs would cause indescribable devastation amid the lightly-built sections. Although wedded to the

Digitized by Google

submarine, which she has energetically developed, Japan might be prepared to accept further restriction of this arm in return for some sort of embargo on aircraft-carriers. As regards battleships and cruisers, she favours modified dimensions somewhat on the British plan, but has made it clear that if future American ships are built to existing treaty standards she will follow suit.

France will take a strong line at the conference and, most probably, decline to consider proposals for the limitation of her light forces, whether submarine or surface. It is to be feared that political friction may be engendered, since Great Britain will undoubtedly press for such limitation and make it a bed-rock condition not merely of any further scaling down of British naval armaments, but for their maintenance at the present and, in expert opinion, wholly inadequate standard. Supremacy in the Mediterranean is the objective of French naval policy, dictated by the necessity of keeping open the sea lanes between Provence and North Africa for the safe transport of her coloured legionaires in war-time.

While willing to concede, in principle, the Italian demand for equality, France is privately determined to maintain a substantial lead over the Italian fleet, and for that reason, if for no other, is certain to press for light-tonnage quotas far in excess of the maximum to which Britain could agree. France has just received a severe shock which is not calculated to make her more amenable

Digitized by Google

at the next conference. Her two 26,500-ton capital ships of the "Dunkerque" class, the first of which is well advanced, threaten to be eclipsed by the pair of 35,000-ton mastodons which Italy is about to lay down. In view of actual and prospective developments in the political arena in Europe, it is not wholly improbable that France may decide against taking any part in the next naval conference.

Italy's policy, enunciated at the London parley in 1930, has undergone no serious modification. Its guiding principle is unqualified parity with France. In other words, the French maximum of combatant power at sea automatically becomes the Italian minimum. That Italy is not bluffing is demonstrated by the truly marvellous development of her navy in the last ten years. In cruisers she has built keel-for-keel against France, in submarines and destroyers she is creeping up to the French level, and by her bold decision to build in 1934 the two largest battleships in the world she has cancelled the French margin in heavy tonnage. If these two Powers are represented at the conference, fireworks are inevitable.

How, then, are the prospects to be summarised? Frankly, they are black. With the possible and dubious exception of Great Britain and the United States, all the Powers are at sixes and sevens in respect of naval policy. However much British statesmen may wish to work in accord with the United States, they are bound to consider, in the

Digitized by Google

first place, the balance of power in European waters, and this, as it happens, is just that aspect of the general problem in which the United States is least interested. The situation in the Pacific is comparatively simple and, given a modicum of goodwill all round, it should be no difficult matter to determine, either roughly or precisely, the future dimensions of the navies of the three Powers chiefly interested. A combined Anglo-American front at the council table would probably induce a reasonable frame of mind in the Japanese delegates, who, being men of sense, would know that neither Great Britain nor America harboured designs against the peace of the Far East.

But tied fast to the leg of British statesmanship is the ball-and-chain of potential, if not actual, menace in the North Sea, the Channel and the Mediterranean. To invite Great Britain to sign a disarmament pact based on Pacific strategy alone would be tantamount to asking the United States to frame its future naval policy without the slightest reference to Caribbean, South American waters, or, indeed, the Atlantic as a whole.

The track of the next naval conference bristles with danger signals which cannot be ignored without courting disaster. It will be held in an atmosphere highly charged with electricity. No swift success need be anticipated. A previous alignment of British and American views on the Rapidan principle will not avail this time and would probably do more harm than good. Japan, France,

Digitized by Google

and Italy are one and all in a suspicious and very touchy mood on the subject of armaments. If the conference is to avoid shipwreck, its course must be steered with consummate finesse. This time the rule-of-thumb navigation methods which proved effective at Washington in 1921–22 and at London in 1930 will be of no avail.

What success or failure will mean to the taxpayers of Great Britain and the other countries concerned is explained in the following chapter.

Digitized by Google

CHAPTER II

WHAT NAVAL LIMITATION MEANS TO THE TAXPAYER

UNLESS some new scheme of naval limitation is hammered out at the next conference the taxpayers of Europe, the United States, and Japan will be called upon to foot a bill of £800,000,000 for the replacement of obsolete fighting tonnage between the years 1936 and 1942. It is particularly to be noted that none of the Powers concerned will appreciably better its status at sea by incurring this onerous financial burden. New ships will replace those past service, but in quantity and quality the rebuilt fleets will conform more or less to the international "yard stick" already in force. To put the case bluntly: the principal maritime Powers, having enjoyed a holiday lasting twelve years, must now face the unpalatable task of paying for it.

Under the terms of the Washington and London treaties the age-limits of men-of-war were established as follows:—

Battleships	20 years (approximate)
Cruisers, pre-1919	16 „
„ post-1919	20 „
Destroyers, pre-1920	12 „
„ post-1920	16 „
Aircraft-carriers	20 „
Submarines	13 „

By prolonging the battleship "holiday" from

Digitized by Google

the end of 1930 to the end of 1936 the London treaty postponed the building of twenty-six capital ships by Britain, the United States, and Japan. Unless the holiday is further extended as a result of the next conference—and in view of such recent developments as the building of four miniature battleships by Germany, two 26,500-ton battle cruisers by France, and two 35,000-ton vessels by Italy, this seems most unlikely—battleship replacement must start in earnest at the beginning of 1937. Britain's first batch will be eight ships, to be built in 1937–41 inclusive.

Cruisers were also affected by the London treaty. Briefly, it was enacted that Britain should build no more first-class cruisers (*i.e.* ships mounting guns above 6·1-in. calibre) before 1937, and should in the interim build and complete second-class cruisers to a total not exceeding 91,000 tons. Thanks to this arrangement, the year 1937 will find the British Navy with fourteen cruisers past the age limit and many others on the point of becoming over age.

Between the years 1936 and 1942 no less than 844 men-of-war belonging to the five principal Powers will complete their span of effective life.* As these Powers now possess about 1,580 fighting ships built and building, it is clear that in the six years following the termination of existing agreements nearly three-fifths of their

* This total does not include aircraft-carriers, sloops, gunboats, or other auxiliaries.

Digitized by Google

total combatant tonnage will become due for replacement.

That is one result of limitation by international treaty. The armament race that in 1921 threatened to involve all the Powers was merely postponed; it was not permanently averted. Delegates to the next conference, which is to determine whether present treaties are to be extended or denounced, will confront a situation of extreme gravity from the financial point of view, to say nothing of the political aspect. To make the position clear it is necessary to present a tabular statement of the ships of each navy that will pass the established age-limits between 1936 and 1942:—

	British Empire.	U.S.A.	France.	Italy.	Japan.
Battleships .	10	13	9	4	9
Battle cruisers .	3	—	—	—	—
Cruisers . .	32	—	4	9	20
Destroyers .	113	218	31	56	69
Submarines .	35	79	51	27	52
	193	310	95	96	150

Grand total, 844 vessels.

Consideration of this table at once brings home the magnitude of the bill for naval construction that the taxpayers of the five countries will have to meet—not, be it repeated, for any expansion of their sea forces, but solely and simply to maintain the existing ratios of strength.

Digitized by Google

If the 844 vessels listed in the table as due for replacement in 1936–42 are actually replaced, their successors will, it is true, be *new* ships, but they will not be *extra* ships. Relatively, the strength of each navy will remain much what it was at the end of 1934.

Owing to the sharp variation in shipbuilding charges at home and abroad it is not practicable to give an exact estimate of the total sum involved in this work of tonnage replacement. In round figures, however, it may be assessed at a minimum of £800,000,000. Since 1914 the cost of naval tonnage has advanced with giant strides. Pre-War battleships averaged £2,000,000, or approximately £80 a ton. Nowadays a battleship built to the "Washington" standard of 35,000 tons would cost about £200 a ton in Great Britain and much more in any foreign country. An extreme example is furnished by the German "pocket battleships," which are costing from £375 to £400 a ton, due to the special alloys and other expensive materials used in their construction.

Cruiser prices have risen by a still steeper gradient. H.M.S. *Chatham*, a ship of 5,400 tons built in 1912, cost the country £300,000 complete. H.M.S. *Leander*, a cruiser of 7,000 tons built in 1931, represented an expenditure of well over £1,600,000. To demonstrate more graphically the changed conditions as regards the financial side of naval armaments, let us compare the fighting value received by the Royal Navy when it built the

Digitized by Google

battle cruiser *Tiger* in 1914 with that of the cruiser *Cornwall*, built in 1928 :—

	H.M.S. *Tiger*.	H.M.S. *Cornwall*.
Displacement, tons	28,900	9,750
Guns	Eight 13·5 in. Twelve 6 in.	Eight 8 in. Four 4 in.
Weight of broadside from main guns, lb..	11,300	2,000
Protection	Heavy armour throughout	No side armour, Deck over vitals
Speed, knots	30	32
Cost	£2,088,000	£2,252,110

When every allowance is made for the depreciation in money values since 1914, the difference in the cost of these two vessels—one a capital ship mounting the heaviest guns, clothed in stout armour, and capable of fighting in line against battleships, the other a ship little more than one-third as large, with comparatively light armament and flimsy protection—is still amazing. Be the reasons what they may, the fact that we are now getting much less value for expenditure on ships of war than we were twenty years ago is incontestable. Apart from the increase in labour and overhead charges, the difference is due primarily to the modern craze for speed and the elaboration of technical equipment.

Although the destroyer and the submarine are comparatively "small deer," their cost per ton equals, and often exceeds, that of their larger

Digitized by Google

consorts. In the British Navy the destroyer type comprises the flotilla leader of 1,475 tons and the destroyer proper of 1,375 tons. The average cost per ton is £237 for the former and £218 for the latter: in other words, the leader is priced at £340,000 and her smaller sister at £300,000. In the United States, France, and Japan, destroyers, in common with every other type of warship, are much more expensive. Half a million sterling per boat would be a low average to take when estimating the cost of destroyer replacement by the five Powers with which we are dealing. As nearly 500 of these craft are due to be replaced during 1936–42, the bill for destroyer construction alone cannot be much less than £250,000,000.

As will be shown in a later chapter, submarine building charges are subject to fluctuation. By the London treaty the maximum tonnage of individual boats is fixed at 2,000 tons, but for the purposes of our present survey we must strike an average through the various types now in favour at home and abroad. The latest British specimens are the *Thames*, of 1,805 tons, the minelaying submarine *Porpoise*, of 1,500 tons, and the coastal boat *Sword-fish*, of 640 tons. We may therefore accept 1,300 tons as the mean displacement of future submarines, particularly as this average applies more or less to the submarine fleets of other Powers. In view of the very qualified success of such monstrosities as the British *X*.1 (2,425 tons), the U.S. *Nautilus* (2,730 tons), and the French *Surcouf*

Digitized by Google

(2,880 tons), it is unlikely that many more submarines of cruiser dimensions will be built—at any rate in times of peace.

Without going into a maze of detail, it may be affirmed that the average cost of a modern British submarine is £365,000; but taking into account the higher building charges prevalent abroad, an estimate of £500,000 for each new boat built by one or other of the five Treaty Powers is not excessive. As the number of submarines due for replacement in or before the year 1943 is 244, it would cost £122,000,000 to complete the work. To the taxpayers of those countries where the submarine is still a cherished arm this figure should be of special interest. So far from being cheap, the submarine, in proportion to its size, is the most expensive of all naval weapons.

Sufficient data bearing on the economics of naval construction have now been collated to enable us to prepare a table showing, roughly, the cost of replacing the 844 men-of-war belonging to the five Treaty Powers which may have to be replaced within the next seven or eight years. It should be added that in each case the estimate errs, quite definitely, on the side of conservatism:—

Capital ships	£336,000,000
Cruisers	130,000,000
Destroyers	243,000,000
Submarines	122,000,000
	£831,000,000

Digitized by Google

Few of us are able to grasp the significance of such colossal figures. We must bring them down to a level much nearer to every-day experience before we can picture the effect that expenditure on such a scale must have, first, on the national budget, and, secondly, on the individual payer of taxes.

This total of £831,000,000 must be divided between the five Powers, and then sub-divided again by six—the number of years during which the vessels in question are becoming obsolete. This simple calculation completed, we find that each Power—Great Britain, the United States, France, Italy, and Japan—will be spending nearly £28,000,000 a year for six years on naval construction. That is more than two and a half times as much as Great Britain has spent on new ships in any year for the past six years.

To the taxpayer in each country it will mean the imposition of a crushing burden; it will involve heavier taxation and the inevitable effect on world industry and commerce. Keenly as one may desire to see the naval defence of Great Britain restored to its proper strength and its rightful prestige, the prospect of such an expenditure on new ships is little less than appalling.

Is there, then, no way to escape this new fiscal burden and its devastating sequelæ? There is. One such way has been consistently advocated by the British Government, acting on Admiralty advice, for years past. British spokesmen have

Digitized by Google

never ceased to point out that the limits of size in ship categories established at the first naval limitation conference in 1921 were needlessly exorbitant. We have appealed time and again to the statesmen of other Powers to consider the possibility of an all-round reduction in size, not merely of battleships but of all combatant vessels.

There has been much controversy on this question of man-of-war dimensions, internationally as well as nationally. Even in this country there is no settled opinion as to the ideal size for the future capital ship. There are officers who favour the 35,000-ton mastodons of the *Nelson–Rodney* breed There are earnest and thoughtful students of naval history like Admiral Sir Herbert Richmond who contend that the world's naval affairs could be managed perfectly if an embargo were laid on the construction of any man-of-war exceeding 6,000 tons. The Admiralty's own figures, publicly put forward at every international armaments gathering since 1927, are a maximum of 25,000 tons and a minimum of 22,000 tons.

We have seen already that the modern " Washington " battleship of 35,000 tons costs nearly £200 a ton to build. It is a legitimate inference that a ship of 22,000 tons would cost no more per ton to build than a mammoth of 35,000 tons, in which case each vessel replaced would represent a saving of £2,380,000. And the replacement of capital ships alone between 1936 and 1942 will entail the building of forty-eight new vessels. Is

Digitized by Google

£114,000,000 such a bagatelle in the budgets of America, Japan, France, and Italy that Great Britain alone considers that amount of money to be worth saving?

Nor is it only in the replacement of capital ships that large economies could be effected. As is shown elsewhere in these pages, the 10,000-ton limit for cruisers adopted at the Washington Conference has led to the construction of vessels of questionable fighting value, immensely costly in first charges and in annual upkeep, and not really justified by any accepted rule of tactics. So convinced was the British Admiralty of the futility of these big "tin-clad" cruisers that for several years it voluntarily abandoned the type in favour of a smaller class. It was hoped that the wisdom of our example would be perceived abroad and that a general scaling down of cruiser dimensions would set in.

That hope proved illusory. The big cruiser continued to obsess the thoughts of foreign naval experts, especially those of the United States, and in the autumn of 1933 the First Lord of the Admiralty had to inform Parliament that the Admiralty found themselves, with great reluctance, compelled to revert to the construction of larger cruisers, although the change involved a reduction in numbers. Two 9,000-ton cruisers absorbed as much of our permitted tonnage as three ships of 6,000 tons.

If foreign Powers persist in adhering to the

Digitized by Google

largest permissible type of cruiser, the replacement bill for over-age ships of this type between 1936 and 1942 will exceed £130,000,000. On the other hand, an international agreement to restrict future cruisers to 7,000 tons would enable £33,000,000 to be subtracted from the total cost. Once more it must be emphasised that this reduction in size would not affect the relative strength of the fleets concerned in the slightest degree.

The present torpedo craft in the British Navy—1,475 tons for flotilla leaders and 1,375 tons for destroyers—appear to be the smallest to which naval men are prepared to give their benediction. Consequently there is little hope of effecting any reduction in the monstrous bill for replacing the 487 vessels of this type which will become obsolete in the period under review.

Deletion of the "cruiser submarine" from the navy lists and the limitation of future submarines to 640 tons would mean a saving of £50,000,000. At the Geneva Disarmament Conference in 1933 the British Government proposed that submarines should be restricted to 250 tons. This suggestion shared the fate of the earlier British proposal that submarine construction should be banned altogether. It is possible, however, that a maximum of 640 tons would command wider support, this figure being not much below the average of the British and German boats that operated with entire success in the first two years of the War. Acceptance of such a limit would sensibly check the out-

Digitized by Google

pouring of national wealth on naval construction in the next decade.

We can now summarise in tabular form the economies that could be effected by the five Powers concerned if the lower limits of man-of-war tonnage specified above were adopted :—

	Cost.	Saving.
Capital ships, 22,000 tons .	£221,560,000	£113,140,000
Cruisers, 7,000 tons . .	97,500,000	32,500,000
Destroyers, 1,500 tons .	243,500,000	—
Submarines, 640 tons .	73,200,000	48,800,000
	£635,760,000	£194,440,000

It will hardly be contended that a saving of £194,000,000 is of no importance to the Powers concerned, whether individually or collectively. Divided up it represents nearly £39,000,000 per country, but, in fact, the largest saving would accrue to Great Britain, whose proportion of new construction in the two principal classes, capital ships and cruisers, is greater than that of any other Power.

Nor would the saving be confined to building charges. The smaller vessels would naturally cost less to maintain in commission than the big ships now in service, and in the course of a few years the economies due to this cause would reach a very respectable total.

The foregoing analysis of the " L.s.d." of naval limitation is submitted for earnest consideration.

Digitized by Google

In dealing with such complicated figures it is impossible to guarantee complete accuracy, but the results here presented are believed to be correct in the main.

The problem, it will be seen, touches the purse of every individual taxpayer at home and abroad. If the people who foot the bill could make their voices heard at the next naval conference they would, I am convinced, overrule those " experts " —mostly foreign—to whose passion for the biggest ship and the heaviest gun the inflated dimensions of modern naval budgets are largely due. By accepting " cuts " in ship tonnage a little more drastic than those I have indicated, the Powers could halve their current naval expenditure without sacrificing an iota of security based on the existing scale of relative strength.

Digitized by Google

CHAPTER III

THE BRITISH NAVY IN ECLIPSE

If Great Britain became involved in war to-morrow, which of the three Services—Navy, Army, or Air Force—would be the first to come into action? The answer must depend on the identity of the enemy. War with a Western European Power would almost certainly begin with air fighting. There would be raids and counter-raids on such cities, ports, dockyards, arsenals, and railway nodal points as could be reached, with the dual purpose of inflicting material damage and intimidating the populations. In this case, therefore, the opening phase of hostilities would be mainly in the hands of the Air Force. Under existing conditions it would find us utterly unprepared.

As an air Power Great Britain has declined to sixth place in order of strength. It is just conceivable, therefore, that a Continental enemy might bring us to subjection by air invasion alone. If our Air Force were outnumbered by three or four to one it would have no chance of practising that retaliation which is probably the most, if not the only, effectual defence against this form of attack. We must face the brutal truth that the country's will to win might not survive many weeks, perhaps

Digitized by Google

not many days, of a concentrated air offensive to which no adequate retort could be made. With at least a third of England exposed to repeated and heavy raids, with a daily toll of death and destruction that might assume terrible proportions, and with the knowledge that the enemy was having and would continue indefinitely to have everything his own way, public opinion might conceivably demand peace at any price.

That danger will persist unless and until we establish our Air Force on a standard equal to that of the strongest Continental Power. Nothing less will suffice. Until that standard is reached this country will continue to live under the shadow of a menace of which every citizen is aware, consciously or sub-consciously. It is a shadow from which British statesmanship cannot escape, and to which foreign cynics attribute in large measure our frenzied and obviously one-sided desire to reduce the world's armaments. The indignity of this attitude cannot always be obscured by a smoke-screen of rhetoric.

My object in writing this book is to present the case for the restoration of our dwindling naval power, but it would be both dishonest and stupid to pretend that a strong Navy is all that we need to make us secure from aggression. What follows, therefore, is based on the assumption that the culpable neglect of our air defence will be rectified before it is too late. British requirements in respect of national security can be presented in a nut-shell :

Digitized by Google

a one-Power standard in air and naval armament, the former a Continental, the latter a world standard. That is the minimum price we must pay for safety and political tranquillity.

Assuming, then, that a future war finds us as strong in the air as our adversary, the initial phase of raiding and cross-raiding would not be likely to produce decisive results. The probability is that air attacks on non-military objectives would die down by mutual but tacit consent, each side realising the futility of inflicting indiscriminate damage and slaughter which were always repaid in kind.

Granting a measurable equilibrium of striking force, it is difficult to see how a war could be lost or won entirely, or even mainly, as a result of air operations. Air power has become the indispensable handmaid of fleets and armies, but nothing in its past history or its contemporary development foreshadows a time when it may become an entirely effectual substitute for either or both. To preach the contrary, as many air enthusiasts do, is to propagate a heresy which may have dire effects upon national defence.

Owing to their vital importance, all questions relating to national defence demand cool and sober judgment, unaffected, so far as is humanly possible, by prejudice, fad, or fashion. Those who profess extremist views on this subject should pause to consider the consequences that would ensue if their views were put into practice, and, when an emergency arose, found to be fallacious. It is easy to

Digitized by Google

perceive that an untrammelled enthusiast, armed with plenary power, might with the best will in the world plunge his country into destruction. Doctrinaires, fanatics, and men possessed of a single idea may, if vested with authority, prove more dangerous than a foreign foe.

While the spectacular air fighting on the outbreak of war would probably give the public—who would be its principal victims—an exaggerated impression of the power of this weapon, the Navy would be going about its business in the traditional manner; that is to say, silently and unobtrusively. Yet these naval operations would be of far greater importance in their effect upon the course and outcome of the war. Unless the national spirit has decayed, the country could and would continue to wage the war in spite of air raids, no matter how violent and persistent—always provided it was able to hit back.

Serious and widespread damage must inevitably be suffered; in some parts of the land industry and transport might be almost paralysed until such time as our counter-offensive mitigated the severity of the raids or, as might well happen, caused them to cease altogether. But it is not easy to conceive of air attack alone causing havoc on a scale great enough to bring a stout-hearted nation to its knees, unless, as I have said above, the enemy's superiority in air power was so overwhelming as to render anything like direct defence or counter-attack impossible.

Digitized by Google

In the opinion of most authorities, the advent of the air arm has not seriously modified the broad principles which dictate British strategy in war. In the future as in the past our fate will be determined on the sea. So long as food and other essential commodities continue to arrive in the requisite volume, it is difficult to imagine any circumstances that would compel us to accept defeat. For an uninterrupted flow of supplies would signify that the command of the seas was still in our hands, rendering invasion impossible. Therefore, setting aside the damage and disorganisation liable to be caused by air attack, which, however alarming and painful, would—on the premise I have accepted—hardly be sufficiently widespread to break the nation's will or dislocate its industrial mechanism, the one and only agency that could force us to surrender is famine. It is strange that this truth, of which we had convincing evidence in the latter half of the Great War, should be so readily forgotten by many of those who are in a position of authority, either as legislators or instructors.

In how many histories of the Great War do we find appreciation of the really crucial phase of that long struggle? Practically all the Continental and most of the British historians are agreed that the really decisive months were March and April, 1918, when the German offensive in the West was at its most dangerous stage. Nevertheless, it may be affirmed, without diffidence, as a positive and de-

Digitized by Google

monstrable fact that the supreme crisis had occurred twelve months earlier. It is a controversial question whether, had the Germans broken through in the spring of 1918 and severed the British army from the French, the War would have been as good as lost; but it cannot be seriously suggested that in such a contingency Great Britain would have been compelled to lay down her arms unconditionally. Even had her Continental allies fallen away, she could have maintained the struggle in her natural element, the sea, quite long enough to ensure a peace by negotiation.

Lest this proposition be disputed, let it be remembered that the overthrow of the Allied armies in the West would not have impaired to any serious extent the ability of the British and United States naval forces to maintain the blockade which had already undermined the enemy's powers of resistance. And is it conceivable that the British Empire and the United States, faced with this common crisis, would not have stood together and wielded their last but most formidable weapon with the utmost resolution?

Thus, to assert that a complete victory on the Western Front would have won the War for Germany is to flout the facts. Because her own rulers fell into this error, Germany was overtaken by ruin. Hindenburg and Ludendorff ignored or grossly minimised the factor of sea power, as indeed did the military men on both sides throughout the War. In April, 1917, when German submarines

Digitized by Google

sank 881,000 tons of shipping in four weeks and the British Admiralty visualised the total collapse of the Allied cause a few months hence through lack of tonnage, the British and French military staffs were still thinking of the War solely in terms of divisions. Whether to concentrate troops here or there, whether to attack in the West or the East, whether to consider the launching of new expeditions overseas which would have involved new armadas of transports and supply ships—such were the preoccupations of the military mind at a period when, as never before, the fate of civilisation was being determined by current events at sea. Never were first principles so completely ignored, and never did the full penalty come nearer to being exacted. It seems doubtful whether even to-day the British people realise how narrowly they escaped catastrophe.

It will be granted, then, that the Navy must remain our chief weapon unless and until the art of war as we know it is completely revolutionised. Lacking clairvoyance, we can legislate for the future only on the basis of present knowledge and experience, the sum of which confirms all previous teaching as to the primacy of sea power in the scheme of British strategy. If through sheer apathy or an unpardonable misreading of our own history we fail to maintain an adequate standard of naval power, we shall decline in peace and perish in war. Without a strong navy our country would have no voice in the world's council chamber; we

Digitized by Google

should not be consulted when issues of capital relevance to our own welfare were being decided.

Not once but fifty times in the past has the British Navy prevented a rupture of the world's peace. When a State meditates a certain policy which might lead to war, it is less concerned with the moral approbation or disapproval of its neighbours than with their power to frustrate that policy. Always hitherto the friendship or enmity of Great Britain has been courted or dreaded because of her naval strength. We raised a mighty army in 1914–18, but in the beginning it was only a potential factor which in no way influenced the German decision. There is, however, almost general agreement that a timely intimation of our resolve to throw our naval power into the scale would have given pause to the advocates of war.

Even if we possessed, as we do not, an air force of the first magnitude, it would be no deterrent to a bellicose State in any part of the world, if only because the limitations and the local effect of air power are well known to professional strategists. But whether in the English Channel or the China Seas the British Navy might intervene with decisive results—a truth which often seems to be recognised more clearly in foreign capitals than in London itself.

Since the Great War the British nation has treated its Navy with an indifference which smacks strongly of ingratitude, but which is probably due to ignorance of what the Navy stood, and still stands, for

Digitized by Google

in our national life. To place the entire blame for the post-War decay of our naval power on the shoulders of the politicians is unfair. No Government dare oppose for long the definite will of a majority. Had there been at any time since the Armistice a widespread public demand for the rehabilitation of the Navy it could not have been ignored by the Government of the day, whether Labour, Conservative, or National. But no such demand has been put forward with the necessary weight of public opinion behind it, and, whether from lack of vision or of moral courage, few politicians have troubled to sponsor a cause which apparently promises neither kudos nor votes.

The only prominence now enjoyed by the Navy is that of a pawn in the game of international politics. Its strength has been sapped by a succession of "cuts" dictated on the one hand by idealism and on the other by economy. Scores of valuable ships and thousands of highly-trained officers and seamen have been dismissed in the hope that this wholesale surrender of sea power would encourage other nations to disarm. No such result has followed, however. On the contrary, those to whom these costly gestures were addressed have continued to strengthen their own navies, no doubt with mingled feelings of gratitude to Great Britain for smoothing their path and contempt for her voluntary surrender of the asset to which she mainly owes her security and her prestige.

The grave consequences of this renunciation

Digitized by Google

will be fully disclosed in later chapters. Here I propose to examine the causes which have led the British people—not, it must be admitted, for the first time in history—to turn a blind eye and a deaf ear to the needs of the sea service. It is true that Parliament votes the Navy Estimates year by year with little opposition and less interest. There is none of the vigorous controversy which is a regular feature of debates on naval expenditure in other countries, notably in the United States and France. But this lack of interest is in itself a most disturbing fact. Twenty years ago the naval debates in the House of Commons were invariably conducted with heat and fervour, because naval defence was then recognised as a vital issue. Nowadays the First Lord of the Admiralty presents his Estimates to a House whose thin attendance is the measure of its boredom.

Conceive the consternation, followed by protests probably exceeding the limits of Parliamentary decorum, which would have been aroused in 1914 had the Prime Minister announced either that the entire cruiser programme for that year had been cancelled, or that, for the sake of international harmony, the Government had decided to reduce by twenty units the cruiser establishment which the Admiralty had fixed as the minimum consistent with safety. Yet in 1929–30 both these announcements were made without exciting more than a few mild protests by individual members.

The parallel may be challenged on the ground

Digitized by Google

that whereas in 1914 we were face to face with the German menace in the North Sea, the position twenty years later was fundamentally different, in that nowhere was there a definite threat to our naval security. While the latter premise is open to question, its implication is what really concerns us. It amounts to this: that the Navy is to be nurtured and strengthened only when one or more of our neighbours give unmistakable signs of impeaching our security at sea; at all other times it may safely be neglected, starved, and denied the means of maintaining its power and efficiency in relation to any potential enemy, accepting the adjective in its broadest sense. Surely such a policy is the negation of statesmanship.

I will not weary the reader by labouring the argument, for which we have biblical authority, that weakness allied with wealth invites aggression. History has been written in vain if the people of this country believe that their individual safety, liberty, and prosperity would still be assured were the Navy allowed to sink into impotence. As for the British Commonwealth of Nations, it would crumble and fall to pieces once the vinculum of sea power were snapped.

The experience of centuries ought to have engraved these truths on the mind of our people, and perhaps it has done so. Perhaps the neglect which the Navy has suffered in recent years is only another symptom of the mental fatigue which necessarily follows a prolonged and bloody war.

Digitized by Google

Without that excuse a former generation allowed our naval power to decline to an ebb almost as low as that which it has reached to-day. For thirty years after the Crimean War—which had not seriously drained the nation's blood or depleted its treasury—our weakness at sea was patent to friends and foes alike. Matters at length became so critical that in the late 'eighties a few resolute naval spirits, ably abetted by a section of the Press, started an agitation which led to something like a panic. The sequel to this was the famous Naval Defence Act of 1889, which eventually gave the country a strong and well-balanced fighting fleet.

From that date until 1914 the service had no serious cause to complain of its treatment at the hands of Parliament or public. Repeated demonstrations of its value as a factor in the preservation of peace added immeasurably to its prestige. Had the Navy not been sufficiently strong to impress would-be aggressors there would have been war in 1898 over Fashoda and, thirteen years later, over Agadir, not to mention the critical period of the South African War when almost every foreign hand was against this country. Even in 1914, as I have suggested above, a well-timed and uncompromising announcement of our resolve to marshal the full weight of sea power against a breaker of the peace might have held Germany in check. This is, of course, disputable, but in support of it there is a mass of documentary evidence from the German side.

Digitized by Google

Throughout the fifty-one months of war the British Navy was fundament, pillar, and buttress of the Allied cause. For the first two and a half years it kept the seas reasonably safe for the countless ships bringing food, munitions, and reinforcements to the Allied peoples. Then for a few months, it is true, our control of the sea routes was menaced by the great German submarine offensive, but even this was met and overcome in a comparatively short time.

To have maintained command of the sea year in, year out, with but one temporary setback, was a superlative achievement which ought to have filled the nation with pride and gratitude. But the deeds of the Navy, unlike those of the Army and the Air Force, were necessarily unseen. Only their effects were visible, and these were not always traced back to the true cause. The unsleeping watch and ward over near and distant seas; the iron blockade which slowly but surely broke Germany's stubborn will to hold out, if not to win; the fierce grapple with the U-boats and their gradual and decisive defeat—these things did not lend themselves to publicity.

It was a great misfortune that the supreme spectacular event of the War afloat should have ended in bitter disappointment. A resounding victory at Jutland would have counted for more in the eyes of the British people than the incomparably greater feat of repulsing the submarine assault. Had the High Seas Fleet been routed with heavy

Digitized by Google

loss, it is exceedingly doubtful if the British Navy would have had to endure the trying years through which it has passed since the War. Hundreds of naval officers have expressed that opinion, and they are probably right. Well-meaning writers have done their best to present the Jutland action in what they consider to be its true perspective. But to attempt to explain the niceties of tactics and strategy to the man-in-the-street is a thankless task, and in this case he suspects special pleading.

He knows that the Grand Fleet at Jutland outweighed the German fleet by nearly two to one and caught it at a disadvantage; he knows also that the German fleet got clear away after inflicting losses far heavier than those it received. All the books written about the action, justifying the British tactics and seeking to explain why the Grand Fleet missed its one and only chance of coming to grips with the enemy, have left the general public unmoved. Ever since Jutland the country has nourished a sense of grievance which is still reflected in its attitude towards the Navy. To pretend otherwise is useless. The Navy has not yet regained the hold it had on the nation's affection and confidence previous to the fateful 31st of May, 1916.

Those who are informed on the matter know very well that Jutland was an indictment not of the Navy itself but of a system to which it had been committed, much against the will of the majority. Almost exactly a hundred years after Nelson's

Digitized by Google

death the principles of naval policy and warfare which had given us supremacy were discarded in favour of a new doctrine. In future the foes of Britain were to be crushed at sea by sheer weight of material. There was still much talk of the "Nelson touch"—that is, striking the enemy hardest where he was weakest—but this was to be applied by building monster ships and guns rather than by superior strategy. It was materialism run mad.

Something might have been said for the new cult had the ponderous weapons it produced been efficient in proportion to their weight. But this they were not. Many of the giant ships were unable to stand up to punishment; their technical equipment was inferior, and, worst of all, no new code of tactics was evolved to enable the new squadrons of leviathans to be handled with the precision and flexibility of the former fleet. Naval officers who belonged to the school of materialism were hypnotised by the magnitude of the weapons they wielded. The battleship ceased to be a means to an end and became something almost sacred, to be preserved at practically all costs. This was no doubt inevitable, for when the cost of each ship jumped from a million sterling to thrice that sum, and tonnage rose by leaps from 15,000 to 30,000, the least imaginative admiral would tend subconsciously to avoid risks that he would have taken as a matter of course with smaller and less elaborate ships.

But the most lamentable result of the stampede

Digitized by Google

to materialism was the schism it caused in the higher ranks of the Navy. Many officers of outstanding merit saw the fallacy of the new doctrines, and with the moral courage befitting their profession refused to subscribe to them. Their subsequent treatment at the hands of the high priest, Lord Fisher, is an abiding scandal. We shall never know how many great captains the Navy lost when Fisher made his clean sweep of " the disaffected element in the service." We do know, however, that with few exceptions the high war commands were reserved for those who shared his views. This is not the place for a character study of Lord Fisher. A naval administrator must be judged by the fruits of his policy, and by that test Lord Fisher fails.

He is no true friend to the Navy who shirks criticism when it is clearly indicated, and who proclaims aloud that all is for the best in the best of all possible services. Nor does the Navy itself appreciate this pose of smug complaisance. Of some of its shortcomings it is painfully aware; of others which it may or may not suspect, and which may be more obvious from without than from within, it would be grateful to have notice. In a long experience I have found naval men as a class singularly open-minded and free from resentment when lay opinions on their profession are intelligently aired. And provided such opinions are backed by a reasonable amount of knowledge, their ventilation can do the Navy no harm, and may conceivably be of benefit to it, if only because they

Digitized by Google

promote a revival of that popular interest in the service which has been less noticeable since the War than previously.

The " silent service " tradition is all very well, but it can be, and indeed has been, overdone. May not the shabby treatment of the Navy, as compared with the sister services, in respect of pay, allowances, and other cognate matters be due in part to the halting and deprecatory manner in which its case has been presented? The fact that naval officers are still denied the marriage allowance granted to their confrères of the Army and the Air Force is palpable evidence of discrimination.

If the average citizen is not, perhaps, so enthusiastic as of yore, he is still interested in the Navy and its work, judging by the multitudes that throng the dockyards during Navy Week. There is, I am well aware, an ultra-conservative element in the Service which abhors publicity of any kind. It resents the mildest curiosity on the part of laymen, and would, if it could, place an impenetrable screen round the Fleet and its doings. When this mentality is analysed it is found to be largely composed of mawkish sentimentality, which finds expression in worship of the more emotional aspects of naval tradition and a morbid distaste for innovation of any kind.

But there is yet another motive. Grave blunders have been committed in naval administration, and these the die-hard group is naturally anxious to suppress. This, however, is where the public

Digitized by Google

may legitimately demand information. They are the people who pay for the Navy, and when their money is wasted through mistakes in policy they have a right to know about it.

Let me add that in one respect at least the Navy does receive preferential treatment. Both in Parliament and in the Press it is, as a rule, treated with the utmost consideration. On many occasions since the War facts have come to light which could have been exploited with telling effect in the House of Commons or in Fleet Street. Yet in almost every instance the critics have held their peace. There could be no stronger proof of that public loyalty to the Navy which has always been the stoutest prop of Britain's sea power.

Digitized by Google

CHAPTER IV

BIG SHIPS OR SMALL?

As a result of international agreements for the reduction of naval armaments, the British Empire is restricted to a total of fifteen capital ships—that is, battleships and battle cruisers. This arbitrary limit to the heavy ship strength of a navy which has to guard a widely-scattered Empire was acceptable only because the other leading battle fleets were proportionately rationed. It is, however, probable that even without the limitation treaties the post-War strength of our battle fleet would have undergone a marked reduction owing to the prodigious cost of the ships composing it.

When the *Dreadnought*, the first all-big-gun battleship, made her dramatic appearance in 1906, we had upwards of forty effective battleships in service. They ranged from the "Majestic" class, of 14,900 tons, to the "King Edwards," of 16,350 tons, and their average cost worked out at slightly over £1,000,000. At that date no other navy was building ships above 16,000 tons. On this displacement it was possible to mount four 12-in. guns and a powerful secondary armament, to provide adequate armour protection, machinery for a speed of 18 to 19 knots, and sufficient coal to drive the ship about 8,000 miles at economical speed.

Digitized by Google

The battleship had, in fact, become standardised, and, except for modifications in armament, protection and machinery to keep pace with technical development, there was no particular reason for abandoning the general standard. All the really essential technical improvements could have been incorporated in later ships without materially increasing their size. Better still, they would have enabled us, had we wished, to lower the tonnage standard without any loss of fighting efficiency.

There is no reason to doubt that the British pre-Dreadnought battleship was as good as, if not better than, her contemporaries in foreign navies. Certainly she was universally copied. In her ultimate form she was a development of the 14,900-ton *Majestic*, begun in 1893, and not until nine years later was this tonnage exceeded. Then, in 1902, the Admiralty decided to reinforce the conventional heavy armament of four 12-in. by adding four 9·2-in., which accordingly was done in the "King Edward" class.

The necessity for and the wisdom of this step are equally questionable. Had it been desired to increase the range and penetrative power of the main armament, this could have been done by mounting 12-in. guns of 45 calibres in place of the 40-calibre weapons. Most naval authorities agree that it was a mistake to add the 9·2-in. guns, for when the ship was firing at any considerable range it was hard to distinguish the splash of a 9·2-in. shell from that of a 12-in., and accurate "spotting"

Digitized by Google

—*i.e.* observation of the fall of shot in order to correct the range—thus became difficult, if not impossible.

An equally serious result of placing four 9·2-in. guns on board was an increase of 1,650 tons in the displacement and of nearly half a million sterling in the cost. Thus, for the price of two "King Edwards" three of the preceding class might have been built, with a definite gain in fighting power. In 1904 the Admiralty went a step further, again without obvious reason, by ordering the *Lord Nelson* and the *Agamemnon*. Each ship displaced 16,600 tons and carried four 12-in. and ten 9·2-in., the cost slightly exceeding that of the *King Edward*. On paper the "Lord Nelsons" were formidable ships, but actually their twin 9·2-in. turrets were so cramped that the rate of fire was slow, and in other respects the ships suffered through having been compressed to fit into the largest dock available at Chatham. Their only defence against destroyer attack was a battery of 12-pounders spaced along the shelter deck, where they were liable to be blown away by the first shells striking the ship. On the whole, therefore, the "Lord Nelson" was not a successful design.

In building this type and the "King Edwards" we had needlessly enlarged both tonnage and cost, and, worse still, incited our rivals to prepare even larger and more powerful designs. As soon as details of the *Lord Nelson* became known, Germany, the United States, Japan, and France all began to

Digitized by Google

plan ships of still greater tonnage. A new era of intensive competition was about to dawn, and as a direct consequence of our misguided action in departing from the accepted standard of tonnage and armament we were faced with the prospect of our magnificent battle fleet—equal to the combined fleets of any two foreign Powers—becoming obsolete in a few years. We were deliberately throwing away the overwhelming superiority we had achieved by ten years of systematic and well-ordered construction.

It was in these circumstances that Lord Fisher precipitated matters by laying down the *Dreadnought* (December, 1905). Displacing 17,900 tons, she carried ten 12-in. guns, and was two knots faster than any earlier battleship. With a naïvete almost incredible, Lord Fisher was confident that he had played a trump card. He appears to have assumed that no foreign nation was technically or financially capable of emulating the "Dreadnought" design, and that in building a group of these super-battleships we should re-establish our supremacy on a firmer basis than ever. Never was error of judgment more severely penalised. In an earlier volume I dwelt upon the *sequelæ* to the "Dreadnought" policy in the following terms :—

> "In the face of palpable evidence to the contrary, it is amazing that this extraordinary thesis (that Germany would be unable to compete with the *Dreadnought*) should have

Digitized by Google

been accepted almost without demur. A few protests were heard, it is true, but they were drowned by the chorus of public applause that greeted this apparently definite check to Germany's naval pretensions.

"The truth is, however, that the appearance of the *Dreadnought*, so far from embarrassing Germany, was an extraordinary piece of good fortune for her. At this date (1905) her main fleet comprised ten first-class and ten second-class battleships, the latter being armed only with 9·4-in. guns. The contemporary British fleet mustered forty battleships, all armed with 12-in. guns, the oldest being equal to the German second-class ships. Our modern armoured cruisers numbered thirty-five, while Germany had no more than eight. On the day that the 'Dreadnought' type of battleship and the 'Invincible' class of battle cruiser made their *debut*, all these vessels were reduced to obsolescence. Great Britain had to write off seventy-five ships, Germany only twenty-eight. . . .

"During the ten years preceding the 'Dreadnought' era the average displacement of battleships increased by only 2,000 tons. In the next decade, however, it rose by at least 12,000 tons. Yet by 1914 the strength of the British Navy as against the German had declined by 40 to 50 per cent. Such

Digitized by Google

were the immediate fruits of the 'Dreadnought' policy."*

The fifteen years that followed brought this policy well within sight of its logical conclusion: the "ideal battleship" of such preposterous size that it could enter hardly any existing dockyard, and of such prodigious cost as to affright the wealthiest nation. In 1921 we were about to lay down ships three times as large as the original *Dreadnought* and costing four times as much. These monsters were fortunately killed by the Washington Treaty, which forestalled the inevitable revolt of taxpayers in every land against such crazy extravagance. At this time of day it is impossible to discover the officers who were responsible for the steady and rapid inflation of warship dimensions and costs. As legatees of the Fisher policy they were, no doubt, the victims of circumstance; but, be that as it may, they cannot but realise that in pursuing that policy they undermined the foundations of British sea power.

At the close of the War we had a golden opportunity of reverting to rational principles of naval defence. With or without an agreement with other Powers we could have reduced, more or less drastically, the tonnage of our new ships and strained every effort to keep building charges within reasonable limits. If precedent counts for anything, it would not have been long before

* "Navies and Nations," pp. 27–29. (Constable, 1927.)

Digitized by Google

our friends abroad followed suit. In disarming Germany we imposed rigid restrictions on the size of her future fighting ships: armoured vessels not to exceed 10,000 tons, cruisers 6,000 tons, and destroyers 800 tons. These limits were quite arbitrary, and had the trend of subsequent events been foreseen they would probably not have been so drastic. For, as German and domestic critics are fond of asking, if vessels of such moderate tonnage are deemed adequate for the naval requirements of one great Power, why not for all?

Eventually, no doubt, this awkward question will be settled by a revision of the Versailles Treaty, since there is small prospect of restrictions similar to those imposed on the German Fleet finding universal acceptance. But if a 10,000-ton limit for capital ships is rejected as too low, will not the Treaty revision afford another and more promising chance to establish a tonnage standard far below the one now in force? By urging a maximum of 25,000 tons, or alternatively one of 22,000, the British Admiralty has implicitly condemned the Fisher policy to which it was for so long wedded. That is of great benefit to the country, and it is to be hoped that the recoil has not yet spent itself.

The figure of 22,000 tons invites inquiry. Does it represent the smallest capital ship which, in the opinion of the Admiralty, would be capable of performing in an efficient manner the functions of a ship of the line, or is it merely a rough-and-

Digitized by Google

ready compromise to meet the views of extremists and moderates?

By extremists I mean those naval officers who are still anxious to go " all out " in the matter of tonnage and gun calibre, and who hold that the maintenance of our position at sea demands a limited number of very large ships rather than a greater number of medium-sized vessels. Such officers now represent a small and dwindling minority, while the moderates are growing steadily in numbers and influence. Since naval history affords absolutely no support for the theory that mighty ships and ponderous guns are the only talisman of victory, its adherents are driven to plead the necessity of keeping to the present inflated standard unless or until the other maritime Powers consent to a reduction.

That argument must not be dismissed without examination, though it is not quite so impressive as it seems. It is true that battle fleets of to-day are composed of very large ships, but their average age is high, and many would have gone to the scrap-heap before now had not their lives been artificially prolonged by treaty. It is not with these vessels that we need concern ourselves, but with their successors. Unless the battleship holiday proclaimed at the Washington Conference in 1921 and renewed at the London parley in 1930 is further extended at the next meeting of the Powers, it will soon become necessary to replace the first groups of over-age

Digitized by Google

capital ships.* Hence the importance of deciding betimes with what they are to be replaced.

There is every reason to believe that if the British Admiralty followed its own devices its new battleships would displace about 22,000 tons and be armed with 11-in. guns, in contrast to the "Nelsons" with their 35,000 tons and 16-in. guns. Again, the United States Navy Department would probably lay down ships equivalent to the "Nelsons" in tonnage and armament. Japan, on her part, appears to favour a type of some 25,000 tons, with 14-in. guns. French views are indicated by the design of the new battle cruiser *Dunkerque*, a ship of 26,500 tons, mounting eight 13-in. guns, while those held by Italy are indicated by her decision to build two ships of 35,000 tons each.

An international agreement to keep within 22,000 tons might be an ideal settlement of the problem from the British point of view, but at the moment there seems little likelihood of this. The restriction of gun calibre is of secondary importance; once the limit of displacement had been fixed each Power might well be left to its choice of armament. Assuming 22,000 tons as the maximum, one Power might elect to mount six 16-in. or 15-in.; another would prefer eight

* In view of the laying down of two 26,500-ton ships in France, two 35,000-ton ships in Italy, and four miniature battleships in Germany, it is obvious that the "holiday" is already at an end.

Digitized by Google

13·5-in. or 14-in., while a third, perhaps, would put volume of fire before weight and choose ten or twelve 12-in.

The factors of speed, protection, and cruising endurance would also materially affect the design and the choice of armament. It does not follow that the mounting of 16-in. guns in certain foreign ships would compel us to adopt the same calibre. From the point of view of material, the outstanding lesson of Jutland was the ability of the moderate-weight gun (11-in. and 12-in.) when mounted in a stoutly-armoured ship, to hold its own against much heavier metal carried in a vessel with inferior armour protection.

By proposing to limit future naval artillery to 12-in. or even 11-in. calibre the British Admiralty has tacitly admitted the capability of such guns to fulfil all necessary requirements. Larger ordnance has undeniable advantages, *e.g.* superior accuracy at long ranges and greater destructive power, but against these must be set the drawbacks of increased ship dimensions, area of target, and cost. It would be rash to dogmatise on a technical subject which excites endless controversy even among experts, but British naval opinion—founded on a unique store of experience—appears to be hardening in favour of guns lighter than those now mounted in our battle fleet. Incidentally, it is pointed out that advances in the science of metallurgy, coupled with improved methods of manufacture, render it possible to produce to-day a

Digitized by Google

gun of moderate calibre which would be equal in all respects save weight of projectile to the 15-in. of war days.

British naval authorities are far from unanimous in their views on what the future capital ship ought to be. Some of them oppose any reduction in the present standard of 35,000 tons and 16-in. guns; others prefer a smaller vessel on the lines recommended by the Admiralty, but qualify this by insisting that we cannot afford to reduce tonnage or armament unless the reduction is universal; others, again, consider ships of 10,000 to 12,000 tons to be large enough for any purpose, while that distinguished naval officer and historian, Admiral Sir H. W. Richmond, advocates a maximum of 6,000 tons.

Now, we have seen that the United States is the foremost champion of the very large ship exemplified by the prevailing standard: that is, 35,000 tons with a 16-in. armament. Therefore unless her naval controllers can be persuaded to modify their present attitude it is to be assumed that her next battleships will conform to this standard. In that event, what should be Britain's response? If the United States alone were in question it might be good policy to design our own ships on a smaller scale, since neither nation regards the other as a potential enemy. But other Powers are involved, and if they, too, decided to build up to the Washington standard—as Italy has done—our own position would have to be reviewed.

Digitized by Google

The question resolves itself into this: should we be well advised to build ships from 10,000 to 13,000 tons smaller than their foreign contemporaries and carrying a proportionately lighter armament? Few would be bold enough to answer in the affirmative. No Board of Admiralty would be likely to sponsor a programme of 22,000-ton battleships while the other leading Powers were constructing vessels of 35,000 tons, nor could public opinion be expected to approve what it would naturally regard as a suicidal policy.

This is not to say that the smaller vessel would be hopelessly outclassed by the larger. At the Battle of Jutland ships carrying nothing heavier than 12-in. guns more than held their own against antagonists of superior tonnage and gun-calibre, and under modern conditions few naval officers would hesitate to engage a Washington 35,000-ton battleship with a vessel built to the Admiralty's proposed standard of 22,000 tons. Nevertheless, it can only be repeated that neither the Admiralty nor the public would consider for a moment the reconstruction of our battle fleet on a scale of definite inferiority in tonnage and gun power to the fleets of other Powers.

Consequently, those critics who are urging us to build very small fighting ships regardless of what the rest of the world may do are preaching to deaf ears. Naval defence is too serious a subject to lend itself to radical experiment. There is at the same time no obvious reason why, if the United

Digitized by Google

States decides to retain the 35,000-ton battleship, we should adhere to precisely the same standard. A cut of several thousand tons could be made without any vital sacrifice of fighting power, and every ton saved would be a gain from the financial standpoint. It is unfortunate that American naval opinion should have become so attached to huge dimensions, but fairness compels the admission that the cult of tons and guns originated in this country, and if its heresies have spread to the New World we cannot justly complain.

There is always the possibility of some modification taking place in American views on ship design, which, as we shall discover later, have a definite political motive. Meanwhile, pending a clearer view of future requirements, every effort should be made to reduce the cost of naval material. Already we have drawn perilously near to the point at which this material would become prohibitively expensive. So long as the national finances remain in their present state it is inconceivable that we should spend £7,500,000 on a single battleship, as we did on the *Nelson* and the *Rodney*, respectively.

Fine vessels though they be, these two ships are veritable monuments of extravagance. They appear to have been designed with a complete disregard for economy. Instead of installing the well-tried 15-in. gun, which had given entire satisfaction, the Admiralty chose to develop a new 16-in. type. It is stated on good authority that the guns and turret armour alone cost nearly £3,000,000 in

Digitized by Google

each ship.* When full allowance has been made for the abnormal shipbuilding charges prevailing in 1922, when the two vessels were begun, the riddle of their staggering cost is still unsolved.

The exact amount of money which has been squandered—no other word seems adequate—on our fleet of aircraft-carriers is another puzzle, but such figures as are available suggest a preposterous total. There was less excuse for this prodigal expenditure in view of the fact, which must have been as patent ten years ago as it is to-day, that the large aircraft-carrier is a transient type, hastily improvised to meet novel requirements and infallibly doomed to extinction in the near future.

Excluding the *Argus*, a merchantman hurriedly converted during the War, and the *Hermes*, a ship of moderate tonnage (10,950), we have four carriers of imposing dimensions: the *Eagle*, 22,600 tons; the *Furious*, 19,100 tons; the *Courageous* and the *Glorious*, each of 18,600 tons. If the published figures are reliable, these four ships represent a total investment to date of £21,000,000—equivalent to the collective cost of the *Nelson*, *Rodney*, and *Hood*, the three largest fighting craft afloat, or to that of seven battleships of the "Queen Elizabeth" class. Since the aircraft-carriers have no combatant value themselves, but merely exist to take to sea an aggregate of about 190 aeroplanes, some explanation of this lavish expenditure appears to be called for.

* Jane's "Fighting Ships," 1931, p. 17.

Digitized by Google

The *Eagle* was the first of the " Big Four " to go into commission. Built originally as a battleship of the Chilean Navy, but never completed in that rôle, she was purchased in 1917 by the British Government and modified to serve as an aircraft-carrier. Although her engine-power was increased to give her more speed, she does not appear to have been a particularly suitable ship for the purpose. The purchase price was £1,334,000, but this proved to be only a small part of her eventual cost. Her conversion took over two years. The result can hardly have been satisfactory, for after spending a short time at sea she returned to dockyard and remained there for another two and a half years. Since then she has undergone more than one big refit, and up to the end of 1932, she had absorbed well over £5,000,000. Yet she can accommodate no more than twenty-one aircraft.

The *Furious*, a smaller ship, began life as one of Lord Fisher's " freak " cruisers. She was designed to carry two 18-in. guns, but in course of construction was altered with a view to carrying aircraft, one of the 18-in. guns being deleted. After the war she underwent a four-year refit, since when she has provided a good deal of further employment for the dockyards. It is computed that she has cost in all over £6,000,000. She carries a total of thirty-six aeroplanes. The *Courageous* and the *Glorious*, ships of the same general design, costing about £5,000,000 each, have histories very similar to that of the *Furious*. Each has a capacity of

Digitized by Google

fifty-two machines. All these vessels, including the *Eagle*, are highly efficient in the performance of their duties, but it is difficult to believe that the same work could not be done satisfactorily by smaller and cheaper ships.

The giant carriers are very expensive to operate, the fuel bill of each during a normal commission being six times as heavy as that of a battleship. Moreover, they present such an immense target and are so vulnerable to every form of attack that in time of war a considerable portion of the fleet would have to be told off to protect them. In short, our aircraft-carriers are a floating reminder that naval administration since the War has departed from the twin principles of efficiency and economy which in former days were rightly considered fundamental.

Naval Staff enthusiasts invariably argue that their pet institution provides the surest guarantee against costly blunders in ship design. The fact remains that in spite of the large naval staff we have had since the War more than one white elephant has been added to the Fleet.

In former days the mine was not a popular weapon in the British Navy, and it remained for the Germans to demonstrate its potency. After *three years* of hostilities we ourselves developed an efficient type of mine, which took a heavy toll of the enemy's shipping in the concluding phases of the struggle. All our mine-laying operations were conducted by improvised ships—barring a few

Digitized by Google

specially designed submarines—whereas the Germans, long beforehand, had built craft expressly for this purpose, and during the War they produced the cruiser-minelayers *Brummer* and *Bremse*, which came into prominence by wiping out a Scandinavian convoy.

They were ships of 3,800 tons displacement, with a speed of 28 to 30 knots, an armament of four 5·9-in. guns and two torpedo tubes, and had stowage capacity of over 300 mines. Both were scuttled at Scapa Flow, but not before they had been inspected by Admiralty officials. While there is no evidence that these German ships inspired the design of H.M.S. *Adventure*, they may have suggested the building of such a vessel.

Although launched as far back as 1924, the *Adventure* is still a mystery ship—in the sense that her general design is inexplicable. Her displacement (7,260) is nearly twice that of the *Brummer*, but, on the other hand, she carries more mines (340). One would suppose that a " cruiser-minelayer " would be endowed with high speed, but the *Adventure's* maximum is under 28 knots. Finally, in place of the *Brummer's* powerful armament, which could, and did, enable her to fight as a cruiser, the *Adventure* carries only four 4·7-in. guns. In short, she has neither the speed to escape her pursuers nor the metal with which to beat them off. This curious vessel cost about £1,500,000. All things considered, it is not surprising that the type has never been duplicated.

Digitized by Google

Our post-War cruisers have not escaped criticism. Except the *Adventure*, none was laid down until 1924. Three years previously the Washington Treaty had fixed a maximum of 10,000 tons for future cruisers, guns up to 8-in. calibre being permitted. When the time came to build the first British ships these limits appear to have been adopted as a matter of course, though it has never been pretended that the Washington type of cruiser was evolved with an eye to strategical necessity.

It owed its genesis to the fact that the United States wished to be free to build ships equivalent to our "Hawkins" class, which displaced 9,800 tons and mounted seven 7·5-in. guns. These five vessels were, however, purely a war product, having been designed for the specific purpose of hunting German raiders. But for the Washington Treaty the standard British cruisers built after the War would probably have resembled the *Emerald* and *Enterprise*, ships of 7,100 tons, armed with 6-in. guns.

As it was, preference was given to the Washington type, and of the twenty-three units projected in 1924–25 fifteen had been laid down before the London Treaty put a stop to the further construction of this class. If the term "fighting ship" denotes a vessel able not only to deliver hard blows but also to withstand them, then our 10,000-ton "County" cruisers are definitely not fighting ships. Over 630 ft. in length, with a very high freeboard, they present an enormous target both to

Digitized by Google

torpedo attack and gunfire. The armament of eight 8-in. guns is extremely powerful, and the speed of 32 knots is adequate. But to obtain this degree of gun-power and mobility, protection was ruthlessly sacrificed. Save for a steel deck over the vitals, armour protection is non-existent. The whole structure lies open to high-explosive shell, the devastating effects of which on unarmoured ships were repeatedly seen in the War.

That a naval staff with an unlimited store of war experience at its command should have approved the design of the "County" cruisers is truly remarkable. After Jutland the cry was all for "more armour," having regard to the fate of the *Queen Mary*, the *Indefatigable*, and the *Invincible*—battle cruisers of high speed and formidable armament combined with comparatively light armour protection. When, soon after the Jutland affair, the new battle cruisers *Renown* and *Repulse* joined the Grand Fleet, Admiral Jellicoe declined to accept them because of their inadequate protection. They were therefore returned to dockyard to receive extra plating. Yet compared with our present "County" cruisers the *Renown* and her sister were heavily-armoured ships.

It is significant that the most damaging criticisms of our post-War cruisers have been uttered not by laymen but by professional experts, including one of the actual designers. Sir William J. Berry, late Director of Naval Construction, who was in office when the later representatives of the

Digitized by Google

" County " class were designed, has written about them in the following terms :—

> " The great weakness of the type is the insufficiency of the protection that can be afforded, particularly on the sides and above-water decks amidships, where the deck immediately over the machinery spaces is usually at a height slightly over the waterline, owing to the comparatively shallow draught of the vessels. All the while such high speeds and great endurances are held to be essential the ship must be of such size that she cannot be adequately protected against a ship with gun power equal to her own. As at present built, *a well-placed salvo of 8-in. shells would place the ship receiving it out of action. . . .*" *

How these same ships would fare if exposed to attack by torpedo or mine has been explained with equal frankness by Sir George Thurston, another naval constructor of wide experience :—

> " The interior of such a cruiser is so fully occupied by boilers, machinery, and magazines that it is not humanly possible to provide by bulkheads, water-tight compartments, or other methods of under-water protection immunity from torpedo or mine attack. Therefore, while in the interest of ordinary safety it is

* *Brassey's Naval and Shipping Annual*, 1931, p. 110. (Author's italics.)

Digitized by Google

> advisable to keep the vitals as far away as possible from the sides and to sub-divide to the fullest possible extent, *it must be recognised that the explosion of a large mine or of a torpedo with a powerful war-head would, in the majority of cases, utterly wreck and destroy the vessel.*" *

Taken together, these two statements made on the highest possible authority constitute a grave indictment of the fifteen cruisers built for the Navy between 1924 and 1930, at a total cost of £30,000,000. No layman dare venture to speculate on the reasons that induced the Naval Staff to countenance the building of large and very expensive ships which are liable to be disabled, if not summarily destroyed, by one salvo of shell, a single torpedo, or a single mine. Nevertheless, the fact that they were built affords legitimate ground for public censure, which cannot be fobbed off with the familiar plea that " the experts know best."

The fact that these brittle ships would go into action each carrying about 700 officers and men lends a more sombre note to the criticism which they so richly deserve. That the London Naval Treaty dealt a heavy blow to British sea power is common knowledge, but at least it called a halt to the construction of the overgrown " tin-clad " cruiser type with which we have been dealing, and for that we may be thankful.

* *Brassey's Naval and Shipping Annual*, 1925, p. 65. (Author's italics.)

Digitized by Google

CHAPTER V

" TIN-CLADS " AND CONVOY

THE London Naval Treaty had far-reaching effects upon British naval policy in general and cruiser construction in particular, the latter being our chief concern for the moment. Some months before the London Conference assembled Mr. Ramsay MacDonald, in his capacity of Prime Minister, had visited the United States to discuss the prospects with President Hoover. As subsequent events revealed, Mr. MacDonald confided to the President at their interview, which was strictly private, the British Government's decision to accept a much lower standard of cruiser strength than they had hitherto claimed. Instead of a minimum of seventy ships, they would be content with fifty. Not a whisper of this remarkable change of front was allowed to reach the British public, to whom eventually it was communicated in the form of an accomplished fact. That it evoked only a half-hearted protest is significant of the lukewarm interest which was taken in naval affairs at that time.

The Navy Estimates for 1929 provided for three cruisers, two being of the 10,000-ton " County " type, and the third a smaller vessel; but when

Digitized by Google

the Labour Government was formed in that year one of its first actions was to cancel the two larger cruisers. The surviving ship was the *Leander*, the first of a new type in which it was sought to combine adequate speed and fighting qualities in a hull of moderate size. The new design was welcomed by naval critics as " a return to sanity " in cruiser policy. Certainly it needed little argument to show that vessels like the *Leander* were far better adapted to general requirements than the over-grown and costly, yet highly vulnerable, ships we had been building up to then.

As has been seen, the London Treaty vetoed the construction of any further 10,000-ton cruisers so far as the British Empire was concerned, besides disallowing the mounting of 8-in. guns in other ships we might lay down while the Treaty remains in force. Moreover, the total British cruiser tonnage to be completed from 1930 to 1936 was kept within very modest limits (91,000 tons). In these circumstances it seemed imprudent to construct any cruiser larger than the *Leander*, since to do so would be to encroach unduly on our slender margin of tonnage.

Eight ships of the new type have been authorised so far. The *Leander* herself was commissioned in March, 1933. The displacement is 7,140 tons, the contract speed 32½ knots, and the main armament eight 6-in. guns, twin-mounted in light armoured turrets. Thanks to a short belt of armour on the water-line, in association with a

Digitized by Google

protective deck, the *Leander's* defence is superior to those of her larger sisters. Her fuel-oil capacity of 1,800 tons, though scarcely more than half that of the "County" ships, should suffice for a cruising endurance of 8,000 miles, which appears to be ample.

At first sight, therefore, the *Leander* makes an excellent impression. She has all the qualities requisite in a cruising ship, whether for duty with the battle fleet or as a sentinel on the trade routes, and if her cost were moderate it would seem the part of wisdom to multiply the type indefinitely. But there's the rub. The *Leander* is, in fact, the most expensive cruiser yet built for the British Navy, having cost nearly £235 a ton, as compared with £212 for the *Exeter* (an 8,400-ton ship with six 8-in. guns) and slightly less than £200 for the "County" class (10,000 tons with eight 8-in.). This rapid rise in the cost per ton of successive cruiser types is a disturbing symptom. Lacking full details of the *Leander*, it is impossible to account for her inordinate cost. In part, at least, it may be due to the elaborate nature of her internal fittings, a feature which was very marked in earlier vessels. Unquestionably, too, a heavy price has to be paid for high speed.

Before the War 28 knots was considered a remarkable pace for cruisers. With few exceptions, our cruisers of the War programme were designed for 29 knots. Then the United States and Japan both began building 33-knot ships, their example being

Digitized by Google

followed by France and Italy. Thus, when our first post-War cruisers came to be designed they were engined for 32 knots, a figure which has undergone only a fractional increase in the later ships. For two generations the value of high speed has been a controversial topic in naval circles. The pros and cons are so fairly balanced that it is quite impossible to draw hard-and-fast conclusions. Nevertheless, a large body of naval opinion leans definitely to the view that 30 knots is an adequate speed for modern British cruisers, despite the phenomenal velocities claimed on behalf of certain foreign craft.

There is no doubt that if the Admiralty saw their way to accepting this figure our cruisers would be much cheaper to build, for it is the enormous engine power now in demand which is largely responsible for the rise in building charges. Reduced speed means a smaller ship, and therefore an all-round saving in first cost and maintenance. A vessel embodying the armament, protection, and other essential qualities of the *Leander*, but limited to 30 knots, need not exceed 6,000 tons, and could probably be produced for little over £1,000,000.

A striking illustration of what high speed costs is furnished by a foreign cruiser recently built. With her machinery developing 61,000 horse-power, this vessel steamed at 30 knots. At full power she worked up to 110,000 h.p. and a speed of 32¾ knots. Therefore, every knot above thirty involved an extra 15,000 h.p., and to gain each

Digitized by Google

additional knot as much power was necessary as would have driven the ship at a speed of 20 knots.

Whether it is really vital that our cruisers should be faster than 30 knots is one of those questions which a naval staff exists to explore. What seems clear enough is that we cannot afford to build many 7,000-ton cruisers at a cost of over £1,600,000 per ship. Even if the country were basking in prosperity the economic factor could not be ignored when naval defence was under review; in times of financial depression this factor assumes a capital importance.

The public at large has usually been content to accept without question the Admiralty's decisions on shipbuilding policy, but it has a right to demand that the money voted for this purpose shall be laid out to the best advantage. Can it be said that this has been done in the case of the *Leander* and her consorts, or, for that matter, in the case of any of the battleships, cruisers, or aircraft-carriers built or converted during the last ten years?

There is frequent discussion in Parliament on such topics as the size of the Admiralty staff, the cost of maintaining the Royal dockyards, and other charges on the Naval budget; but rarely, if ever, is a question asked about the cost or suitability of new ships. Yet it is very important that this branch of naval administration should be closely scrutinised, and those who deprecate such inquiry are not doing the Navy any service.

It has been shown how the misguided zeal of the

Digitized by Google

materialistic school, freed from the restraining influence of informed criticism by the "hush hush" policy introduced by Lord Fisher, "improved" the battleship until her cost became so ruinous as to menace her very existence. It would be unfortunate were the cruiser to fall a victim to the same blunder. Surely, therefore, it is not presumptuous to urge the necessity for rigid economy in the preparation of all new warship designs.

Experienced naval officers join with the ablest engineers in assuring us that in technical matters simplicity and efficiency almost always go hand in hand. Over-mechanisation, as exemplified by the bewildering mass of "gadgets" found in our post-War fighting ships, is an evil which seems to be spreading,—fostered, no doubt, by the cult of specialism. It should be firmly resisted.

The 10,000-ton cruiser with heavy guns and flimsy protection having been definitely abandoned —for it is in the last degree unlikely that this type will ever be revived for the British Navy, treaty or no treaty—and the "Leanders" in their present form being too expensive to build in the numbers required, a new and smaller type was evolved in 1931–32, presumably to serve as Fleet cruisers. For this duty great steaming endurance is not indispensable. The *Arethusa*, nameship of the new class, was ordered in the autumn of 1932. At the time of writing few particulars are available, but she is understood to be a ship of 5,200 tons

Digitized by Google

and 32½ knots speed, mounting six 6-in. guns in twin turrets.

The *Arethusa* may be regarded as a modern version of the "C" and "D" cruisers, which performed such useful service during the War with the Grand Fleet and the Harwich Force. It is probable, however, that the new ship will have a higher freeboard and superior nautical qualities. The mounting of the 6-in. guns in closed turrets, as in this ship and the "Leanders," is a thoroughly sound development inspired by war experience. A higher rate of fire, it is true, can be maintained with guns on single mountings, but considerations of weight render it impossible to provide a separate turret for each gun.

On the other hand, the open shields formerly in vogue proved veritable death-traps at Jutland and in other engagements, the gun-crews being mown down by splinters from shells exploding in the rear. Hence the necessity for closed turrets which are splinter-proof, even though they are unable to withstand direct hits. The sacrifice in rate of fire which this arrangement entails is more than compensated by the improved protection to personnel.

By the year 1935, when the next Naval Conference is due to assemble, the post-War cruiser strength of the British Empire will be constituted as follows, including ships under construction:—

13 10,000-ton ships ("County" class), 32 knots, eight 8-in. guns;

5 9,000-ton ships ("Minotaur" class), 32 knots, twelve 6-in. guns;

Digitized by Google

2 8,400-ton ships (*York*, *Exeter*), 32 knots, six 8-in. guns;
8 7,000-ton ships ("Leander" class), 32½ knots, eight 6-in. guns;
4 5,200-ton ships ("Arethusa" class), 32½ knots, six 6-in. guns.

That these thirty-two ships will be the only modern cruisers available for the defence of the whole Empire is a somewhat startling prospect. The deficit will have to be made up by keeping in commission a large number of ships which, having passed the age limit of sixteen years, will be no longer in a condition to endure the strain of war service. Further, these obsolete ships would be liable to encounter opponents of greatly superior tonnage, speed, and armament, to whom they would fall easy victims.

By 1935 the five leading naval Powers will possess the following modern, *i.e.* post-War, cruisers built and building: British Empire, 32; United States, 38; Japan, 33; France, 19; Italy, 19. These comparative figures are disturbing enough, but even they do not depict the true situation, for the average displacement and gun-power of the American cruisers is considerably above that of the British ships. The former average 9,430 tons, the latter only 8,400 tons. Never before has Britain's relative strength in cruising ships fallen so low.

A serious objection to the "Arethusa" type is its marked inferiority to all foreign cruisers of contemporary design. It is, indeed, the smallest and most lightly-armed type of cruiser now under con-

Digitized by Google

struction for any navy. For the first time on record the British Navy is building ships which could not face foreign adversaries of their own class. This policy of producing inferior ships was forced upon the Admiralty by the one-sided treaty restriction on British tonnage to be completed at the end of 1936. Fortunately it is not to be further pursued. In November, 1933, the Admiralty announced that the cruiser programme for that year, one "Leander" of 7,000 tons and three "Arethusas" of 5,200 tons, had been recast. The "Leander" and two "Arethusas" had been deleted, and in their place would be built two 9,000-ton ships of a new class (*Minotaur* and *Polyphemus*) and one "Arethusa."

In making this announcement the First Lord frankly explained the reasons which had prompted the change in the programme. "The policy of building cruisers of comparatively small tonnage (7,000 and 5,200-ton ships, armed respectively with eight and six 6-in. guns) had been adopted in the hope that other nations would follow our lead." It had been learned, however, that Japan had six cruisers of 8,500 tons, each mounting fifteen 6-in. guns, building or projected, while the United States had legislated for four 10,000-ton cruisers, also to be armed with fifteen 6-in. "If, therefore, our programme, already approved, were to be carried out, the new cruisers would be definitely inferior to those being developed by other Powers."

The First Lord went on to say that as our total

Digitized by Google

cruiser tonnage to be completed by 1936 was limited by the London Treaty to 91,000 tons, the Admiralty had been placed " on the horns of a very serious dilemma." They had to decide whether to go on building a larger number of inferior cruisers or to lay down fewer cruisers of heavier tonnage and stronger armament. As the first alternative was inadmissible the second had been chosen. Hence the revised programme.

Naval opinion as a whole has approved the Admiralty's decision. To continue building ships which in battle could not face their foreign contemporaries would be a thoroughly objectionable policy. The glaring fact that at the London Conference this country was placed in such a position that it must either build second-class ships, or so few of the first-class as to leave the Navy desperately short of cruisers, is a damaging commentary on the British statesmanship of that period.

Official details of the " Minotaur " class are not yet available, but it is surmised that an armament of twelve 6-in. guns will be mounted. As the displacement is to be 9,000 tons it would be quite feasible to mount 8-in. or 7·5-in. guns, but such an armament would be contrary to treaty regulations. Owing, therefore, to American partiality for big dimensions, Great Britain is forced to build 6-in. gun cruisers at least 2,000 tons larger than is technically necessary—one among the many anomalies to which a disarmament treaty drafted on Gilbertian lines has given rise.

Digitized by Google

One does not have to be an expert in naval strategy to perceive the total inadequacy of our present and future cruiser establishment to cope with a serious emergency. It is impossible to imagine any war, other than an insignificant "side-show," which would not impose upon our existing naval forces an unbearable strain.

In view of its high percentage of antiquated material, not more than two-thirds of our cruiser force would be likely to remain available at any given moment after the war had been in progress several months. At a liberal estimate we might then have thirty-three or thirty-four ships at sea. Heavy inroads would be made upon this attenuated force by the demands of the battle fleet, and from the residue would have to be provided cruisers for convoy escort. How many more could be spared for pursuing the surface raiders which might, and in view of our notorious weakness in cruisers certainly would, be sent out to harry shipping on the trade routes which span the globe?

Our present weakness in cruisers is defensible only on the assumption that war is a possibility of infinite remoteness, or that, if war did come, we should have at least a year or two's grace in which to make up the deficiency by intensive building. Neither supposition will commend itself to practical minds. And there is something else of supreme importance to be remembered. During the Great War our principal antagonist was virtually blockaded by geographical conditions. With her coastline

Digitized by Google

embayed by the British Isles, Germany had only two possible outlets to the ocean—the Dover defile and the passage between Norway and the Shetlands. It was therefore comparatively easy for us to seal these exits.

In a future war the problem is not likely to be so simple. Hostile raiders will have every chance of getting to sea unobserved from ports fronting one or other of the great oceans, and the first news of them will come in the form of a long tale of merchantmen sunk or captured, or of wholesale disaster to convoys, argosies and escort ships alike having been overwhelmed by superior force. In the Great War such tidings would undoubtedly have been received with monotonous regularity but for the almost insuperable difficulty which German surface warships met with when trying to get to sea undetected. It would be fatal to allow the exceptionally favourable strategic circumstances of the last war to lull us into a false security.

What, then, is to be done? If the governing power in this country sincerely believed war to be a contingency as remote as it pretends, we should not be spending well over a hundred millions a year on defence. As it is, the possibility of war at any time is clearly accepted, a fact which makes the state of the national armaments a matter of high importance. Blood-curdling forecasts of the consequences of unpreparedness in the air have been conveyed to the public, but seldom is it reminded of what it must expect if we are caught napping at

Digitized by Google

sea. An earlier generation, more alive to the frightful danger of such a position, saw to it that the Navy always enjoyed a substantial margin over potential foes. That watch on the balance of power afloat is no longer maintained with the old vigilance, though the peril has in no way receded or diminished.

The brutal truth is that the Navy of to-day is not competent to safeguard our seaborne trade in the face of a determined attack, and if that menace were to develop the country would be in imminent danger of an acute food shortage, which in the absence of prompt remedial measures might speedily become stark famine. This is not put forward as an alarmist statement. Every statesman and every naval officer—foreign no less than British—knows it to be literally true. Indeed, the realisation by foreign observers of our unprecedented weakness at sea is a very serious feature of the current political situation, and one that may account for the palpable failure of British statesmanship to gain its objectives at the more important international conferences held in recent years.

For the time being our sea power is fettered by artificial restrictions which ought never to have been accepted. While other nations retain full liberty to pile up naval armaments practically without limit, we are not even free to replace obsolete tonnage. It is with regard to cruisers that the dire effects of this handicap are most perceptible. Fortunately, however, there remains one method by which our position could be improved.

Digitized by Google

The London Naval Treaty exempts from limitation any surface combatant vessels which do not exceed a displacement of 2,000 tons, mount guns above 6·1-in. calibre (not more than four of which must be carried), mount torpedo equipment, or possess a speed over 20 knots. In other words, it permits the unlimited construction of a type which might be the lineal descendant of the third-class cruisers that were so common forty years ago. By taking advantage of this loophole in the Treaty we could provide a number of ships capable of undertaking certain duties that must otherwise fall to the regular cruisers, of which we have so few.

The proposed new type is a sloop of 2,000 tons, with a speed of 17 to 20 knots, armed with at least three 6-in. guns, besides smaller guns and depth-charge throwers, and equipped, if possible, with a seaplane. She might be propelled either by steam or internal-combustion engines, the latter being preferable, perhaps, on account of the increased radius of action they confer.

Sloops of this type would constitute a most welcome addition to our depleted cruising fleet. In time of peace they would be useful on foreign stations, where they could perform police duties and exhibit the flag more worthily than the small and feebly-armed sloops that we have been building of late years. Provided the design were of the simplest character possible, and the temptation to instal " gadgets " were rigorously eschewed, each vessel ought to cost less than a destroyer. In war

Digitized by Google

its defensive value would be incalculable. It would be sufficiently fast and seaworthy to act as "sheep-dog" to a convoy of merchantmen, and strong enough to deal with the largest submarine intruder. Probably, too, it could repulse any surface commerce destroyer other than a regular cruiser.

In normal circumstances, with a reasonable margin of cruiser strength available and no treaty restrictions on replacement, the building of third-rate vessels such as those described might not be desirable. But the circumstances now existing, and likely to persist for some years, are by no means normal. We are faced with the alternative of remaining dangerously, nay, temptingly weak at sea, or of employing every permissible expedient to strengthen the Navy upon which so much depends.

The building of powerful sloops to supplement her cruiser force has already been initiated by France, and seven had been laid down by 1934. They are ships of 1,968 tons, propelled by Diesel engines at a speed of 15½ knots. Travelling at economical speed they can cover 9,000 miles without refuelling. The armament comprises three 5·1-in. and some smaller guns. They are fitted for minelaying, and provision is made for carrying a seaplane.

Given a slightly higher speed and 6-in. guns in place of the 5·1-in., the French design would suit British requirements quite admirably. The sloops we have built in recent years cannot be regarded in

Digitized by Google

any sense as a potential reinforcement to the cruiser establishment. Just over 1,000 tons, with turbine machinery for 16½ knots, their armament is limited to two 4-in. or 4·7-in. guns and their fighting value is insignificant.*

Except for mine-sweeping work they would be practically useless in war, yet we have built or are building thirty-three of these feeble craft at an average cost of £175,000.

No survey of our resources for protecting the trade routes in war would be complete without some mention of the merchant vessels which would certainly be called upon to play their part. Magnificent service was rendered in the Great War by armed liners, and in a future struggle the dearth of regular cruisers would compel us to draw even more heavily on this reserve. It should, however, be understood that the largest and fastest liner is, at best, a very inferior substitute for the cruiser proper. True, the famous 10th Cruiser Squadron, which maintained the North Sea blockade for the greater part of the War, consisted entirely of armed liners, but it was fully realised that if German cruisers ever contrived to break out, this squadron would probably be overwhelmed and destroyed in detail.

Her great length and high freeboard, the absence of any form of protection, and the inflammable

* The *Enchantress*, a "convoy sloop" of 1,500 tons, was ordered in 1933. She may prove to be the forerunner of the larger convoy sloops advocated above.

Digitized by Google

nature of her fittings, all tend to disqualify the liner as a fighting ship. She can only stand up to her own kind, and even then a duel between armed liners usually resembles the affair of the Kilkenny cats.

Since, however, a future enemy would be only too likely to revive the ancient custom of despatching armed merchantmen to prey upon commerce, we should need an ample supply of these auxiliary cruisers to serve as police "specials" on the trade routes. Thanks to the experience gained in 1914–18, an efficient organisation now exists for mobilising, arming, and manning such merchant ships as would be required for naval auxiliaries in an emergency.

It is now the practice of those foreign Governments, *e.g.*, the United States, France, and Italy, which subsidise their mercantile fleets to make financial assistance conditional on the building of new ships to conform as much as possible to naval requirements. As a result, many of the modern liners under those flags have their decks stiffened to receive guns and their hulls specially subdivided to resist under-water attack. The British Government exercises no such jurisdiction with regard to merchant vessels, and it is doubtful if a single British liner built since the War embodies any of these special features.

The value of liners as naval auxiliaries has depreciated in consequence of the marked rise in the speed of cruisers. Twenty years ago there was little to

Digitized by Google

choose between the sea speed—that is, the speed which could be maintained for a considerable period in average weather conditions—of the fastest cruisers and the swiftest liners. Now, however, the disparity is pronounced. It may surprise some readers to learn that there are at present only four British liners capable of steaming at more than 23 knots. These are the *Majestic*, *Mauretania*, *Berengaria*, and *Aquitania*, and in view of their immense size and their value for other purposes it is not to be expected that any of these giants would be employed as auxiliary cruisers.*

On the other hand, all modern cruisers can steam at more than 30 knots, and not a few have exceeded this velocity by 5 to 8 knots. Thus, whereas at one time the armed liner which met a regular cruiser could escape the unequal combat by flight, the fastest merchantmen of to-day could scarcely hope to evade the slowest cruiser. All things considered, therefore, the possession of a great fleet of ocean liners does not compensate for weakness in purely naval resources, though it may be in some degree a mitigating circumstance.

From the foregoing review there emerges all too clearly the fact that in the one type of warship essential for the protection of commerce we are at our weakest. There is no longer any question of maintaining even a one-Power standard in cruiser tonnage. Suddenly confronted with a threat of

* The new giant Cunarder, of 73,000 tons, makes a fifth, but her enormous size disqualifies her as a potential war cruiser.

Digitized by Google

war we should find it impossible to take the necessary measures to safeguard our floating trade. Most, if not all, of the thirty-two modern cruisers would be absorbed by the Fleet, leaving less than a score of obsolete ships to guard the illimitable outer seas. To provide escort for ocean convoys and at the same time to find ships for the multifarious duties which cruisers alone are competent to perform would be a hopeless task.

But if we cannot give reasonable immunity to the ships bringing food and raw materials to our shores, we must make up our minds to face the spectres of famine, industrial collapse, and chaos. This utter dependence on imported supplies is the Achilles' heel of Britain, at which her foes may be trusted to strike more vigorously in the future than they have done in the past. That Germany by her own unaided effort came within measurable distance of starving us into submission is an object-lesson which, we may be assured, has not escaped the notice of the world at large.

The cruiser outlook, then, is one of quite exceptional gravity. Entangled in one-sided treaty restrictions, we are powerless to restore the situation by the direct method of building the requisite number of new ships, and we must accordingly exploit every alternative to the utmost. A start should be made by constructing at least a dozen sloops of the type described above. These would represent an invaluable reserve for convoy escort —an urgent demand for which would arise at the

Digitized by Google

first hint of war. It is difficult to think of any sounder investment at the present time than a large programme of sloop construction. Taking £400,000 as the average cost per ship, twelve could be built for the price of one of our large aircraft-carriers.

Meanwhile the preliminary steps towards freeing ourselves from the unreasonable fetters imposed by existing treaties should be considered. That drastic action in this matter would be undesirable is obvious. The naval limitation covenants now in force must be observed so long as they remain valid, but the British peoples should be apprised of the fact that a renewal of those treaties on the original terms would perpetuate and aggravate our present weakness at sea, and for that reason would certainly not promote the cause of world peace.

Irrespective of its unique status as a guardian of commerce, the relative military value of the cruiser has been much exalted as a result of capital ship limitation. Since the year 1921 the construction of battleships has remained virtually at a standstill, only six units having been laid down in the interval—the British *Nelson* and *Rodney* in 1922, the two French "Dunkerque" class in 1933–34 and the two Italian ships in 1934.* But within the same period the five leading naval Powers have legislated for no less than 141 cruisers. Appar-

* The German "pocket battleships" of 10,000 tons are not true battleships, despite their armament of six 11-in. guns.

Digitized by Google

ently, therefore, the cruiser is usurping for the time being the traditional rank of the capital ship as the premier instrument of sea power.

In view of this process it is a coincidence both singular and unfortunate that the effect of recent naval agreements between the Powers should be to condemn Great Britain to a position of inferiority in cruiser tonnage. Whatever the defects of the 10,000-ton 8-in. gun type—and they are painfully evident in the earlier specimens—it is becoming one of the principal fighting units. Yet the London Naval Treaty was so drafted as to inhibit Great Britain from following the other Powers in the further development of the offensive and defensive qualities of this type.

In the latest 10,000-ton cruisers of the United States, France, and Italy the worst shortcomings of the previous examples have been remedied. Speed is now sacrificed to protection, with the result that these new ships are much less vulnerable than their predecessors to gunfire and other forms of assault. We must, of course, abide by our solemn treaty obligations, but it is mortifying to reflect that by a stroke of so-called statesmanship the British Navy should be condemned to inaction while its competitors are eagerly building fighting ships of a new and formidable type.

Digitized by Google

CHAPTER VI

DESTROYERS AND SUBMARINES

"REQUESTS for destroyers constantly came from every quarter, such as the Commanders-in-Chief at Portsmouth and Devonport, the Senior Naval Officer at Gibraltar, the Vice-Admiral, Dover, the Rear-Admiral Commanding East Coast, and the Admiral at Queenstown. The vessels they wanted did not, however, exist."

This is but one among the many passages in Lord Jellicoe's "Crisis of the Naval War" which recall the unceasing and ever-growing demand for destroyers in 1914–18. As the U-boat menace grew in scope and ferocity it seemed for a time as though its success or failure would be largely determined by the number of destroyers we were able to keep at sea. This was especially true up to the summer of 1917, when the convoy system was instituted.

It is common knowledge that this system saved the situation when things were at their blackest, but it is not so generally known that the introduction of convoys was delayed for many months because of the shortage of destroyers for escort duty.* Right up to the end of the War our destroyer

* Jellicoe, "The Crisis of the Naval War," pp. 109 *et seq.*

Digitized by Google

resources continued to be inadequate, yet by that time over 500 of these craft were in service.

At the opening of the struggle, before the submarine had revealed its formidable powers, the dearth of destroyers made itself painfully felt, and as time went on this weakness often handicapped the operations of the Fleet. In February, 1915, owing to the large number of boats undergoing refit and the detachment of others to cope with enemy submarines in the Irish Channel, the Grand Fleet was left with only twenty-two destroyers, a number quite insufficient for screening purposes. "This made it desirable to keep the battle fleet in harbour, except in an emergency."*

Admiral Sir Reginald Bacon has put on record in "The Dover Patrol" the appalling risks which he was compelled to accept by reason of the shortage of destroyers in his command. From every theatre of naval operations came the same story, and it is impossible to doubt that incalculable losses were suffered in consequence of this deficiency.

Yet in the years preceding the War Parliament had made what seemed to be liberal provision for this class of vessel. From 1908 to 1912 inclusive, twenty destroyers were ordered each year; in the two following years the annual quota was reduced to twelve in order to obtain money for the light cruisers which were considered even more important. Nevertheless, 124 destroyers had been authorised in seven years, a total that seems very

* Jellicoe, "The Grand Fleet and its Work."

Digitized by Google

impressive to-day. Behind these new boats was a large reserve of older craft. The latter, however, were soon found to be unequal to the arduous strain of war service, and although they achieved wonders in the circumstances they were never dependable in an emergency.

Whenever the question of destroyer strength was debated in pre-War days the opponents of large programmes always maintained that any deficiency in this type could promptly be made good by new construction. It would be quite feasible, they asserted, to build extra boats at short notice, the time required to produce them being variously estimated at six, nine, and twelve months. All these calculations collapsed when the actual test was applied.

When Lord Fisher went to the Admiralty in October, 1914, he at once put in hand an immense programme of destroyers and submarines, awarding contracts to many shipyards which had not hitherto engaged in this class of construction. "Hopes were held out of the construction both of destroyers and submarines in about twelve months; but labour and other difficulties intervened, and although some firms did complete craft of both classes during 1915 in less than twelve months, by 1916 and 1917 destroyers *averaged* about eighteen months and submarines even longer for completion." *

The conclusions to be drawn from these facts are:—

* Jellicoe, "The Crisis of the Naval War," p. 48.

Digitized by Google

First, that destroyers in very large numbers would be needed in the event of a future war;

Secondly, that old boats are at best a makeshift and must on no account be regarded as substitutes for those of modern design;

Thirdly, that unless the struggle were prolonged it would be impossible to make up the initial deficit by new construction.

Therefore, the only destroyers that count in an emergency are the under-age craft already completed and those in an advanced stage of building.

With these conclusions before us we may turn to the present destroyer establishment of the British Navy—to be met by a posture of affairs which is very unsatisfactory. It may be summed up in two sentences. The destroyer force which constitutes our first line of defence against submarine aggression has shrunk to such small dimensions that it now ranks only fourth among the flotillas of the leading naval Powers. In other words, we have less effective destroyer tonnage built or building than either the United States, Japan, or France.

This startling situation is revealed by figures taken from the official "Return of Fleets" presented to Parliament each year by the First Lord of the Admiralty. It is the practice of the Admiralty to assume that twelve years represents the span of effective life for a destroyer. Once past that limit she is considered to be no longer thoroughly competent to perform her duties. Owing to the

Digitized by Google

necessarily light construction of her hull and machinery, the destroyer deteriorates more rapidly than larger men-of-war, and after passing the age-limit she is not to be trusted to make her speed or to maintain the requisite standard of all-round efficiency. For these reasons, as I have already observed, the only really dependable destroyers are those which have not yet passed the twelfth anniversary of their completion.

Applying this official age-limit to the destroyer lists of the five principal Powers in 1934, and including flotilla leaders which, as a rule, are merely enlarged destroyers, the following position is revealed in units built, building, and authorised :—

Destroyers less than twelve years old.

United States	100 *
British Empire	78
Japan	72
France	59
Italy	57

As it stands the foregoing table is deceptive. Although in number of boats the British Empire comes second, in aggregate tonnage she occupies fourth place, owing to the higher average displacement of foreign craft. For example, the 59 French vessels total 112,069 tons, whereas the total for the 78 British destroyers is about 30,000 tons less.

These comparative figures epitomise the result of starving the Navy of new construction in the post-

* Including 65 authorised in 1934, building to be spread over seven years.

Digitized by Google

War period. During these years we have, as regards destroyers, been living mainly on our capital. In 1919 we had a huge reserve of such vessels, but the majority were prematurely aged in consequence of the strain of war service, one year of which may be considered equal to four years of peace routine. When seven years had elapsed two experimental destroyers, the *Amazon* and *Ambuscade*, were built, but not until 1927 was a regular annual programme of destroyer replacements instituted.

Since then a " short " flotilla consisting of one leader and eight destroyers has been voted each year, with the exception of 1929, when the newly-formed Labour Government saw fit to cancel half the destroyers of the current programme. Meanwhile, large groups of the war-time boats have become obsolete every year, and have either been scrapped outright or relegated to the reserve. And all this time the leading foreign Powers have been engaged in the wholesale production of destroyers of the largest and most powerful types.

During the Great War the destroyers were the first ships out and the last home. Although we built new boats by the hundred, there were never enough. A future crisis would find us with barely one-third the number of destroyers we had in August, 1914, yet the submarine menace would be much more serious than it was at that date. At the beginning of the War Germany had less than thirty U-boats ready for service. To-day there are at least two Powers, either of which could send

Digitized by Google

eighty or ninety submarines to sea at any moment. Since naval opinion unanimously considers the destroyer to be the surest antidote to the submarine, it is instructive to compare the output of British destroyers and foreign submarines in the last ten years :—

British destroyers, built and building ..	78
United States, Japanese, French and Italian submarines, built and building	225

Of these submarines, 130 have been built by France and Italy alone.

As a programme of nine new destroyers a year is not sufficient to maintain our flotillas on an adequate level of strength, it would seem prudent to increase the annual quota by five or six boats. If, however, the present rate of construction is adhered to, we shall possess in 1936 less than eighty destroyers under age, besides fifty older boats of dubious efficiency. In view of the mass production of submarines abroad these figures cannot be regarded with equanimity. Unfortunately, the destroyer, in common with every other type of warship, has much increased in cost. Boats of the latest classes, " D " and " E," average £300,000, a figure which would preclude their multiplication on a lavish scale even if the number of these craft were not limited by treaty.

We have, in fact, undertaken not to exceed by the year 1936 an establishment of 150,000 tons, provided

Digitized by Google

that in the interim no other Power unfettered by treaty restrictions upsets the equilibrium by building an excessive number of submarines or surface torpedo craft. To meet such a contingency the London Treaty embodies a so-called "escalator clause" which authorises additional construction in the circumstances mentioned; but for obvious reasons no British Government would be likely to avail itself of this clause save under stress of dire necessity.*

While the destroyer has not escaped the general process of inflation in tonnage and elaboration of equipment which has been so marked since the War, the British Admiralty has wisely abstained from copying the over-grown destroyers which have become popular with certain other navies. Our latest craft are of 1,375 tons, with a speed of 35½ knots, and are armed with four 4·7-in. guns and eight torpedo tubes. Whether any reduction of this standard is expedient depends on the view that is taken of the functions of the type.

Seaworthiness is of prime importance, for the destroyer is useless for anti-submarine screening purposes unless it can keep up with the big ships in every-day weather conditions. Nor can a speed of 35½ knots be deemed excessive. Probably, therefore, the tonnage and speed of our latest craft are the lowest it is safe to accept. On the other hand, the torpedo armament may be open to criticism on the

* See Chapter I for an explanation of the "escalator clause" and its drawbacks.

Digitized by Google

ground that the next naval campaign will offer few opportunities of attacking battleships with torpedoes from surface craft, leaving aside the question as to whether it would be wise to expose the large and costly destroyer of to-day as a target for the main and secondary armament of heavy ships. On this point, however, current naval opinion must be deferred to, and it is enough that the type of destroyer we are now building is generally approved by officers with war experience.

The following tabular comparison of modern destroyers shows the formidable nature of the latest foreign designs.

	H.M.S. *Eclipse*.	*L'Audacieux* (French).	*Vivaldi* (Italian).	*Fubuki* (Japanese).
Length, ft. . .	312	435	352	367
Displacement, tons .	1,375	2,569	1,628	1,700
Horse-power . .	36,000	74,000	50,000	40,000
Speed, knots . .	35½	37	38	34
Armament:				
Guns . .	Four 4·7-in.	Five 5·5-in.	Six 4·7-in.	Six 5-in.
Torpedo tubes .	8	9	6 (also mines)	9

As will be observed, the British type is much inferior to the rest in size and armament, but, being less burdened with deck weights, it is probably a better sea boat. The French craft are particularly imposing. Although officially rated as "destroyers," they are for all practical purposes light scout-cruisers, which, on paper at any rate, could make short work of the average destroyer. Thirty-

Digitized by Google

one of these huge vessels have been laid down since 1924, and all those completed have surpassed their designed speeds, several having attained over 40 knots on trial.

The Japanese destroyers, too, are exceptionally powerful, being indeed the most heavily-armed torpedo craft of their size in existence. Were the British Navy to build destroyers of these magnified types it would involve a reduction in numbers to balance the greatly increased cost per unit. This would certainly be a mistake. Our requirements call for numerical adequacy rather than individual superiority, and to obtain the requisite numbers it is permissible to accept a lower standard of tonnage and fighting power.

Moreover, in actual practice the medium-sized destroyer may prove the better vessel. Some of the big foreign craft, overloaded with guns and torpedo tubes, are notoriously bad sea boats, their lively motion rendering it impossible to work the armament with effect in rough or even moderate seas. Other things being equal, steadiness of gun-platform must always be the decisive factor in ship to ship duels, and by that criterion the modern British destroyer will bear comparison with the best foreign product.

It may be noted, in passing, that some years ago the Admiralty was urged to build a class of " super-destroyers " displacing nearly 3,000 tons, to be armed with ten 4·7-in. guns and sixteen 24-in. torpedo tubes. Apart from their exorbitant cost,

Digitized by Google

which must have approached £800,000 each, the objection to such vessels lies in the undue concentration of material and personnel in fragile craft which, by nature of their duties, must be exposed in war time to exceptional hazard.

Further, experience in the last war proved that large tonnage and heavy gun armament are of no particular advantage in the rough-and-tumble tactics of destroyer fighting, especially at night. The *Tipperary*, one of the "super-destroyers" of her day, was put out of action in a few seconds during the night engagement at Jutland, while a sister ship, the *Broke*, fared little better. It cannot be said, therefore, that the mammoth torpedo-craft now favoured by certain foreign navies are justified by the dearly-bought lessons of experience.

Turning now to submarines, the place which this arm occupies in British naval policy is not easy to determine. In recent years its value for any work except commerce destruction has been seriously questioned, and more than one naval publicist has urged us to discard it, irrespective of what the rest of the world may do. Since the War Great Britain has consistently pressed for the abolition of submarines on the grounds of their virtual impotence when used in a legitimate manner and the consequent temptation to employ them illicitly to make the most of their peculiar but limited powers of destruction.

That the seas would be cleaner if submarines were banished may be granted; there is in their methods something assassin-like which is at variance with the

Digitized by Google

clean-fighting traditions of the past. Nevertheless, honesty suggests that anti-submarine prejudice is in part compounded of sentimentality and self-interest, with more than a dash of sheer humbug. It would, no doubt, be an excellent thing, not for Great Britain alone but for all the major maritime Powers, were the submarine to vanish, and the British Admiralty has done no more than its duty in striving to achieve that end. But now that the futility of the abolition campaign has been made manifest, shall we not be compromising our national dignity if we pursue the matter any further?

The immense submarine programmes set on foot soon after the Washington Conference, at which Great Britain had made an impassioned plea for abolition, and the fresh spurt of construction on the morrow of the London Conference, at which we had again urged the banning of undersea warfare, should convince the most optimistic minds that the British view has been definitely rejected. That the submarine has come to stay must be accepted as a fact beyond dispute. And while the danger of its being put to unlawful use by unscrupulous hands will always exist, it is uncharitable to credit any civilised Power owning submarines with the intention to employ them as the Germans did.

As for the argument that submarines are valueless except as destroyers of merchant shipping, this is not only contradicted by a fund of experience but is disproved, inferentially, by the British Admiralty's action in continuing to build them. We were

Digitized by Google

one of the first Powers to adopt the submarine, and during the War our production of these boats was second only to that of Germany.

Between the outbreak of hostilities and the Armistice 146 submarines with a tonnage of 151,000 were added to the British Navy. Is it conceivable that this vast under-water fleet would have been built at a time when the industrial resources of the country were being taxed to the utmost had its war value been at all questionable? The submarine may be more useful to some navies than to others, but that it has a positive utility of its own is not to be gainsaid.

From the British point of view it is principally of value for scouting purposes. Our building policy during the War was naturally influenced by the nature of German strategy, and we speedily discovered the need for submarines capable of performing scouting or patrol duty.

> "We built these in considerable numbers, for the several types of patrol boats we diverged into were capable of doing any of several things. They could do the Heligoland Bight patrol, attacking the enemy if met with and reporting to the Commander-in-Chief what they saw on their patrols; they could go out into the Atlantic to hunt U-boats on the traffic lanes, or they could go to the Mediterranean to work in the Adriatic. They were the general-utility craft of the submarine navy." *

* "The Story of our Submarines," by "Klaxon."

Digitized by Google

Every attempt to estimate the precise nature of the services rendered by our submarines in the Great War is handicapped by the paucity of records. No other branch of war activity has received so little attention from the historians. Two excellent books have been written on the subject—"The Story of our Submarines," by "Klaxon" (Commander J. G. Bower, R.N.), and "By Guess and by God," by Lieutenant W. G. Carr, R.N.R.—but neither pretends to be a complete chronicle of the service.

The German naval authorities have thought it worth while to prepare a monumental history of their submarine campaign, running into several volumes. It is strange that the Historical Section of the Committee of Imperial Defence has not thought fit to devote a special volume to the work of British submarines, which, in addition to performing outpost, patrol, mine-laying, fleet duties, and other services, destroyed 54 enemy warships and 274 other vessels.

Contrary to all expectation, they proved a deadly menace to their own kind, many German U-boats being destroyed by their agency. Admiral Sims, U.S. Navy, in his book, "The Victory at Sea," states that in proportion to the number of the various types of anti-submarine craft employed, the Allied submarines accounted for three times as many German U-boats as the Allied destroyers, and twenty times as many as the auxiliary patrol craft. The official histories, both British and German, contain much evidence attesting the war value of

Digitized by Google

the submarine even when it was used in a perfectly legitimate manner.

Apart from secret intelligence reports, the Admiralty depended primarily on our submarine patrols in the Bight of Heligoland for early information of enemy naval movements. No other type of vessel could have maintained this constant vigil well inside enemy waters. Nor was it only in the North Sea that submarines reconnoitred zones, and even ports, which would have been wholly inaccessible to surface craft. The value of the submarine as a scouting unit may therefore be said to have been established beyond cavil.

Its influence on fleet operations was equally marked. Those who dismiss the submarine as a negligible factor seem to have forgotten that the mere threat of this weapon compelled the Grand Fleet to withdraw from the North Sea in the early part of the War. Whenever the Grand Fleet or the High Seas Fleet put to sea, the threat of submarine attack forced the great ships to steam at high speed and frequently to alter course, involving a heavy consumption of fuel and a proportionate curtailment of cruising endurance. It is probably no exaggeration to say that the normal radius of action of a fleet is reduced by at least one-third when the presence of hostile submarines is suspected.

Oddly enough, the defensive value of the submarine has been challenged by certain British authorities, and this point has been laboured at the various disarmament conferences. The late

Digitized by Google

Admiral of the Fleet, Lord Wester Wemyss, however, was under no illusions on the subject.

> "Who (he wrote), with the lessons of the Dardanelles campaign before him, can say that submarines are useless as a weapon of defence? Had any been present off Gallipoli in April, 1915, the landing of the troops on the peninsula would have been impossible; never could the transports and supply ships have lain quietly off those beaches, pouring forth men and munitions as they did, had they been open to submarine attack. As it was, when they did, later on, make their appearance, they sank two battleships and drove the transports into the security of Mudros Harbour, thus increasing enormously the labour and difficulty of keeping the army supplied."

Since the submarine has resisted, and to all appearance will continue to resist, every attempt to secure its abolition, we shall do well to accept it as a permanent addition to the naval armoury. Its almost universal popularity is evidenced by the fact that the submarines built since the War far outnumber those launched in the ten years preceding the War. And our own contribution to this new undersea armada is by no means negligible.

We began by putting afloat in 1923 the largest submarine which had been built up to then. This was the *X*1, a huge vessel of 2,425 tons surface displacement, a speed of 19½ knots, and the un-

Digitized by Google

precedented armament of four 5·2-in. guns. This colossus seems to have been built without any very definite idea of what she was intended for. She cost in all £1,044,000, which could undoubtedly have been invested to better advantage. But though her construction may have been a mistake, it is but fair to add that, contrary to popular belief, she is one of the safest, most seaworthy, and most easily-handled submarines afloat. At least she has proved, if proof were needed, that the building of undersea craft with the dimensions and armament of a cruiser, but with twice a cruiser's radius of action, is a perfectly feasible proposition.

After the *X*1 aberration, our post-War submarine policy reverted to more normal principles. A type suitable for distant patrol work was developed, the nameship, *Oberon*, being launched in 1926. The surface displacement is 1,311 tons, the speed 15 to 17½ knots, and the armament one 4-in. gun and eight torpedo tubes. The "P" and "R" classes which followed are similar though somewhat larger—1,475 tons—and the entire group numbered eighteen boats. A few years ago, either from motives of economy or because of a modification in strategic principles, submarine policy underwent a change. Henceforth two different types were built each year: the first being of large, ocean-going design exemplified by the *Thames*, of 1,805 tons; the second a small boat of 640 tons ("Swordfish" class), presumably intended for coastal defence or short-range patrol duty.

This differentiation of types is in line with foreign

Digitized by Google

practice, and there is a good deal to be said in its favour, not least on the score of economy. While the *Rainbow* (belonging to the "O" class) cost £423,435, the *Swordfish* and her sisters are being built for about £250,000 apiece. Here, as in the case of destroyers, numbers are preferable to quantitative limitation for the sake of greater individual power.

Including those voted in the 1934 Navy Estimates, Great Britain has legislated for thirty-eight submarines since the War, the smallest total of any of the five leading Powers. As most of our earlier boats, built under the War programmes, are already obsolete, our relative position in this class of vessel is steadily deteriorating.

Statistics of submarines in the British and foreign navies were communicated to Parliament by the Admiralty towards the end of 1932, and have since been amplified by new programmes. The figures are now as follows :—

	Built.	Building and Projected.	Total.
United States . .	82	38	120
France . . .	94	15	109
Japan	59	9	68
Italy	43	22	65
Great Britain . .	52	12	64

As is the way with statistics, those above are apt to convey a misleading impression. At least twenty boats will shortly have to be subtracted from

Digitized by Google

the British total on account of age, and a considerable percentage of the United States aggregate is also represented by obsolescent craft. On the other hand, the great majority of the French, Italian, and Japanese units are of modern construction. Since it has, I think, been demonstrated that the submarine is an integral component of British naval power, our patent weakness in this arm cannot lightly be dismissed.

But before a sound and systematic policy of submarine development becomes possible it is necessary to purge the national mind of the fallacious ideas which have clustered about this weapon. To condemn the submarine as an arm that is useless unless employed in a barbaric fashion, and then to continue building submarines on however modest a scale, is, I submit, conduct which exposes us to the well-merited ridicule of our friends abroad. Would it not be better to clear our minds of cant, and acknowledge that in building submarines we are actuated by precisely the same motives of self-defence as inspire the foreign programmes now in train?

If we really believe undersea warfare to be a relic of barbarism we should instantly scrap all our existing submarines and never lay down another. If, conversely, we attach importance to the submarine as a weapon that is valuable alike for defensive and offensive purposes, then we should develop it accordingly and stop "talking at" our neighbours who are doing the same. We cannot have it both ways.

Digitized by Google

CHAPTER VII

THE NAVY'S FUEL IN PEACE AND WAR

"We might almost say that the Allied cause had floated to victory upon a wave of oil." This rhetorical flight by the late Marquess Curzon of Kedleston occurred in his speech to the members of the Inter-Allied Petroleum Conference at an official dinner held in London ten days after the Armistice. Making allowance for the uncritical atmosphere of those exuberant days, it is perhaps not surprising that a statement even of this profound significance should have passed without comment. But, properly interpreted, the speech as a whole, with its insistence that "oil has become a great war necessity" and its admission that the Navy's reserve of this fuel had at one time shrunk to a few weeks' supply, was less of a tribute to the efficiency of the war-time oil organisation than a grave warning as to the future.

For good or ill the Navy is now absolutely dependent for its mobility on a fuel which cannot be produced in sufficient volume in the British Isles. Within the confines of the Empire proper there are, it is true, oil-wells which contribute a modicum to the world's supply, but the percentage is small. It is therefore to foreign sources that we must look

Digitized by Google

for the fuel that now drives every fighting ship under the White Ensign.

Like so many other naval changes of a revolutionary character, the flight from coal was instigated by Lord Fisher. It began with the trial installation of oil-burning boilers in destroyers, and the discovery that the new fuel not only resulted in higher speeds for a given weight of machinery, but that these speeds could be kept up without effort over a much longer period than was feasible in the case of a coal-burning ship with her stokers working like demons. As early as 1909 the first flotilla of big destroyers entirely dependent upon oil was built, and by the end of 1911 there were more than 150 ships in the Navy which burned oil wholly or in part.

In 1912 the Admiralty took the bold step of ordering five great battleships ("Queen Elizabeth" class) and a numerous group of light cruisers, all equipped to burn oil only. The complete abandonment of coal was not yet contemplated, for the battleships of 1913 ("Royal Sovereign" class) were designed as coal-burners; but when Lord Fisher returned to the Admiralty in October of the following year he insisted on these ships also being converted to oil.

The last coal-burning vessels of importance in the Fleet were the four "Iron Duke" battleships and the battle cruiser *Tiger*, which were discarded in 1930–31 in accordance with the London Treaty. The present fighting Fleet consists exclusively of

Digitized by Google

oil-burning craft, and it seems improbable that we shall revert to coal for the propulsion of our warships. A vigorous campaign to this end is being waged, but it does not appear to have made much impression on the naval authorities. The patriotic motives of those responsible for the " back to coal " movement deserve full recognition. Their principal arguments are, first, the danger of compelling the Navy to rely on imported fuel, the necessary supplies of which could not be guaranteed in wartime; and, secondly, the stimulus that would be given to a great national industry, now in decline, if the Navy went back to coal and by its example encouraged the British mercantile marine to build only coal-burning vessels.

As the crusade was launched only a few years ago, it is too early to forecast the results, but, as I have said, the Admiralty has not yet shown any signs of restoring coal to the Navy. The case for coal has been presented with marked ability and admirable fervour, but it has been met by counter-arguments which cannot lightly be ignored. The easy maintenance of high speeds, the increased steaming endurance, the rapidity with which bunkers can be replenished, and the consequent improvement in strategical mobility—these are the points in favour of oil that carry most weight in naval circles.

Officers of the widest experience assure us that the work of the Fleet as a whole during the War could not have been performed as efficiently as it

Digitized by Google

was but for oil-fuel. Oil-burning cruisers and destroyers could re-fuel and return to sea much more quickly than their coal-burning consorts, the time thus saved helping to mitigate the effects of the chronic shortage of patrol vessels. The same officers tell us also that the strain on the personnel of these craft, already most severe, would have become intolerable had it been necessary to coal ship after each cruise.

To these arguments, which any layman can appreciate, are added many others of a technical nature, all emphasising the advantages of oil as a fuel for the Navy. As far as may be gathered, the engineering branch and the corps of naval constructors are practically unanimous in condemning a return to coal. That being so, it is hardly to be expected that any Board of Admiralty would adopt this policy unless some new and irresistible reasons for discarding oil should develop.

With the technical advantages of oil so strongly established it seems hopeless to continue the fight for coal along those lines. It is only with regard to the question of supply that the champions of coal are on really firm ground. But here they have a very strong case. The danger that supplies might fail at a critical moment was anticipated before the War, but it was not taken very seriously because no one at that time foresaw the possibilities of the submarine as a commerce destroyer.

Mr. Winston Churchill, then First Lord of the Admiralty, went into the matter at some length

Digitized by Google

in a House of Commons speech in July, 1912. As he pointed out, our power to obtain additional supplies of oil fuel in time of war, in excess of those which were being stored in this country, depended upon our preserving the command of the sea. If that were endangered, oil would not be the only commodity we should lack.

> " If we cannot get oil, we cannot get corn, we cannot get cotton, and we cannot get a thousand and one commodities necessary to the preservation of the economic energies of Great Britain. If we are unable to bring in the comparatively small number of vessels which would be required to maintain a full supply of oil for our Fleet in time of war, we shall certainly be unable to conduct, as we hope to conduct, the whole vast oversea trade of this country, export as well as import, in spite of the utmost exertions of the enemy."

Mr. Churchill then had a tilt against " some very clever people " who had pointed out that oil was different from other classes of supply, because it would be in part the means by which the initial command of the sea was maintained. This argument he denounced as quite fallacious.

> " It is not upon oil-burning ships that we depend, or are likely to depend for many years to come, for the protection of our trade routes. That protection is maintained by

Digitized by Google

coal-burning cruisers, operating along the trade routes, while the enemy's main battle fleet is being dealt with in the decisive theatre, wherever that may be."

But, as it happened, the "very clever people" whom Mr. Churchill derided were abler prophets than he. They foresaw, what he did not, that the change-over from coal to oil would eventually affect every type of vessel in the Navy, including the cruisers upon which reliance was placed for the defence of the traffic lanes. Before the end of the War tankers were under escort by destroyers and other craft which consumed oil, and at the present time every cruiser in the Navy is an oil-burning ship. It is therefore literally true, as predicted twenty years ago, that the protection of our oil supplies devolves upon warships which are themselves wholly dependent upon that fuel for their power to move.

For several years before the War the Admiralty was doing everything possible to create a large reserve of oil-fuel for the use of the Navy. Tanks were built at all the home naval ports and at several others which the Fleet might have to use in an emergency, and a start was made with the provision of storage accommodation at oversea bases. War broke out before these arrangements were complete. For the first year the oil stocks remained satisfactory, though the consumption proved greater than had been anticipated. Tankers came and went with

Digitized by Google

but little interference on the part of the enemy. But in 1916 the situation began to deteriorate with alarming rapidity. On the one hand, so many new oil-burning ships were joining the Fleet that the drain on the reserves of this fuel was becoming much heavier than before, and on the other hand we were losing many more tankers through enemy action.

As the year advanced matters went from bad to worse, and early in 1917 the position became critical. By that time the total stocks of oil in the country had sunk to 900,000 tons, or little more than half the quantity considered to be the absolute minimum for safety. Fully alive to what was involved, the German U-boats were now devoting special attention to the tankers. Since many of the latter were of great length and low speed, they fell an easy prey to torpedo attack. Month after month the battue of tankers continued, and month by month our oil reserves sank lower and lower.

In his second book Earl Jellicoe states that:—

> "Instead of a reserve of some five or six months we were gradually reduced to one of about eight weeks, and in order to economise expenditure of fuel it actually became necessary at one time to issue directions that the speed of oil-burning warships was to be limited except in cases of the greatest urgency. Such an order in war was a matter of much gravity; the great majority of our light cruisers and

Digitized by Google

destroyers were fitted to burn oil fuel only, as well as our latest and most powerful battleships." *

More recently Earl Jellicoe is understood to have said that at one time we were down to three weeks' supply. Had this terrible fact leaked out it would almost certainly have led to a panic. We can sympathise with the gnawing anxiety which must have beset those who were in the secret as they watched the graph showing the ever-rising curve of tanker losses and then turned to a companion chart depicting the ever-falling level in the oil tanks. It must have demanded great moral courage on the part of Ministers and Admirals to maintain an air of composure and confidence when they knew that in a few weeks' time the bulk of the Navy might be paralysed through lack of fuel. And let it be remembered that when this crisis developed barely more than half the Navy was on an oil-fuel basis. Had coal been entirely superseded at that time, as it is to-day, should we have weathered the storm? It seems certain that we should not.

As luck would have it the German Navy, apart from its submarines, gave few signs of activity in 1917, so that the Grand Fleet did not have to spend much time at sea and was therefore able to economise in fuel. All the same, it is a somewhat ironical commentary on the " all oil " policy which

* " The Crisis of the Naval War," p. 147.

Digitized by Google

had been pursued with such zest by the Fisher school that when, in 1917, the speed of the Fleet had to be reduced in order to save oil, the coal-burning battleships and cruisers were compelled to limit their own pace so as not to out-steam their brand-new consorts which had been designed as oil-burners to give them greater speed.

Drastic measures were taken to restore the situation. Although they could ill be spared, destroyers were detached from the Grand Fleet and other commands to escort the tankers through the submarine danger zones—a direct case of the Navy having to divert part of its strength for the protection of its own fuel supplies. Another expedient which proved highly effective was the carriage of oil in the double-bottoms of ordinary merchant vessels. By this means alone over a million tons of oil was transported. Home supplies by distillation were increased from 12,000 to 50,000 tons a month, and further relief was obtained by a more rigid rationing of oil consumption in all the Allied countries. In this way the crisis was surmounted, though not until a few months before the Armistice was the Navy's reserve of liquid fuel judged to be adequate for any emergency.

If this be ancient history it nevertheless teaches a lesson which we shall ignore at our peril. Nothing is more certain than that a future war of any magnitude would confront us with the old problem, possibly in a form more acute than ever. Conditions, it is true, have changed, but invariably

Digitized by Google

to our disadvantage. In contrast to 1917, when nearly half the Fleet still used coal, all our fighting ships without exception now burn oil. We may have a larger reserve of oil in hand, relatively speaking, but it is certainly not sufficient for a campaign of any duration, and we should have to depend, as before, mainly upon imported supplies.

The modern tanker with its great length still offers an ideal target to the submarine's torpedo, and we may take it that our next enemy will concentrate his offensive against this class of vessel. As for the means of aggression, it suffices to say that the average submarine of to-day is more seaworthy, can cruise further, and uses more deadly torpedoes than its predecessor of 1914–18. And finally there are now several Powers each of which possesses nearly three times as many submarines as Germany had available in 1914.

What, then, can be done to forestall as far as possible the danger of an oil famine in war and its catastrophic consequences? While nothing definite is known of Admiralty policy in this matter, its broad principles have been indicated from time to time, and it is clear that they do not differ materially from those laid down before the War. The principal conditions to be fulfilled were then tabulated as follows:—

(*a*) Oil of a quality suitable for use in his Majesty's ships.
(*b*) Security of supply.

Digitized by Google

(*c*) Reduction of liability to great fluctuations in price, and economy in average cost.

(*d*) Economy in transport and regular employment for tank vessels.

(*e*) Economy in storage.

These conditions were obviously drafted on the assumption that the protection of tankers in wartime would involve no special effort, since their security would be guaranteed by that general command of the sea which we hoped to exert. But that, as I have observed, was before the submarine had come into the picture. "Security of supply," however, does not merely connote armed defence. It has a much broader application, and begins with the selection of those sources which are the least likely to fail us in war. We cannot afford to depend on one or two reservoirs which might suddenly be closed to us as a means of moral suasion by an ambitious or unfriendly neutral, or which alternatively might put us at the mercy of extortionate profiteers. In war no less than in peace, competition is needed as a check on inflated prices.

Great efforts were made by the Admiralty in the years immediately following the War to increase the oil fuel storage accommodation for the Fleet both at home and at overseas depôts.

The immensity of the work put in hand may be gauged from the amounts asked for annually under Vote 10 of the Navy Estimates. In less than ten

Digitized by Google

years the amount voted by Parliament for this purpose reached nearly £7,000,000, which included the provision of new storage facilities on a large scale.

A major depôt was created at Glasgow, on which some £1,145,000 was spent. The new storage accommodation at Plymouth absorbed £630,000, and the extensions at Portland, originally estimated to cost more than a million, were finally completed, after several revisions, at a cost of £956,000.

The air menace was borne in mind in selecting the location of these depôts, for although the utility of Pembroke as a Royal Dockyard was at an end, its geographical position made it suitable for an oil station, and tanks were built there at a cost of £416,000. Even as far away as the Orkneys a fuelling station was prepared, though on a smaller scale, the cost there being shown in the Estimates as £60,000. Before the negotiation of the Irish Treaty, too, work had been done at Haulbowline and Berehaven, where storage costing £39,630 was put in hand.

The old " coaling stations " of the pre-War navy in the overseas Colonies had to be drastically altered to meet the new conditions, and the creation of the Singapore base led to the preparation of an immense oil reserve there. This is to be completed in 1935 at a total cost of £950,000.

The importance of the Eastern seas is shown again in the extent of the storage provided since the War at Rangoon and in Ceylon. The original

Digitized by Google

estimate for the Ceylon works was slightly reduced while construction was in progress, but the amount expended on these works was nevertheless £535,000. The Rangoon depôt cost, when completed, £300,000.

The two key positions in the Mediterranean, Gibraltar and Malta, also had their oil reserves substantially increased between 1920 and 1930. The Gibraltar works cost £214,000 and those at Malta £267,500, while a subsidiary depôt was provided at Port Said at a cost of £55,000.

Other oil-storage facilities provided at oversea bases during the decade in question were :—

Bermuda	£32,000
Jamaica	£47,000
Hong Kong	£110,000
Sierra Leone	£115,000

Nor has the economy drive in recent years wholly stopped progress with the provision of fuel-storage facilities for the Fleet. The Navy Estimates for 1934 included an omnibus Vote for such work, without specifying the places at which it would be carried out. The total Estimate was for £263,000, of which the first £117,000 was to be expended in 1934–35. This was described in an explanatory note in the published Estimates as required " to provide essential storage accommodation to meet fleet requirements."

That word " essential " has a world of meaning.

It has been estimated on good authority that in a future war we should require about 40 million

Digitized by Google

tons of oil a year. A few years ago we were drawing 38 per cent. of our supplies from the United States, 21 per cent. from Mexico, 24 per cent. from Persia, and the balance from Russia, Roumania, etc. Since then the percentage from the United States appears to have substantially diminished, though exact figures are not available. It is clearly in our interests to reduce as far as possible our reliance for vital commodities upon any one first-class Power, whose sympathy we might not possess in a new war. This point need not be laboured, but it was put with refreshing frankness by the late Admiral Sir E. J. W. Slade, R.N., in the following terms :—

> " I think that in the next war the only crude oil definitely open to us will be Persian oil, as it would entirely depend upon whether America was pleased or not with our action whether we should or should not get the crude oil from American sources."

But important though they be, neither the political nor the economic aspect of oil supply comes within the scope of this chapter. Granted that a sufficient quantity of the precious fuel is available at source, how is it to be poured into the thirsty tanks at our home and oversea naval bases when

> " The earth is full of anger,
> The seas are dark with wrath,
> The nations in their harness
> Go up against our path " ?

Digitized by Google

That is the core of the problem. In the last war the bulk of our oil supplies came from the West, and once the convoy system was working smoothly in the Western Ocean the tankers came and went with reasonable immunity. In a future war convoys will, no doubt, be organised from the start, though we shall be hard put to it to find the necessary escort in view of the lamentable shortage of cruisers and destroyers. Tankers will have to take their chance with other merchantmen unless they are deemed sufficiently important to be given special escort, the necessity for which might well arise if they were singled out for particularly determined attack. In any case, if we propose to draw most of our oil from the United States and Mexico the problem of safe transport would be comparatively straightforward. Given enough escort vessels of suitable types—for example, the 2,000-ton sloops armed with 6-in. guns described elsewhere—we could count upon the safe delivery of most of the oil shipped at source.

But if we are to depend mainly on supplies from the East, as is suggested by recent developments in policy, the problem will become much more complicated, for the length of the floating pipe-line will then be increased by thousands of miles. In time of peace tankers from the Persian Gulf follow the Mediterranean route, but the closing of this route in war is one of the more probable contingencies always accepted by responsible naval opinion. Even when the Allied fleets held unchallenged

Digitized by Google

command of its surface in 1914–18, the Mediterranean was one of the most dangerous areas of the entire theatre of war and a veritable graveyard of tonnage. If we found ourselves at war with one of the major Mediterranean Powers it is exceedingly doubtful whether our shipping could continue to use this highway for a week. Most probably we should have to treat the entire Mediterranean as out of bounds for the duration of the campaign.

Those who may be inclined to dispute this assertion are invited to reflect on the conditions. There would be no question of merely providing convoy guard against submarines or light surface raiders. At almost any point between Gibraltar and Port Said convoys would be liable to attack by overwhelming forces, including capital ships and heavy cruisers, not to mention aircraft. Nothing less than a battle squadron complete with ancillary craft would suffice for escort, and this in turn would be exposed to the full weight of the hostile fleet supported by its submarine and aerial auxiliaries. A study of the current British and foreign navy lists should convince the most hardened optimist that the Mediterranean would be no place for British merchant shipping in the eventuality I have pictured.

In that case all trade from the East, including oil traffic from the Persian Gulf, would have to proceed via the Cape. This would involve a much longer voyage and proportionate delay, thus automatically reducing the volume of supplies from this source at

Digitized by Google

the very outset. Our line of communications would be extended by nearly 4,000 miles, a fact of which an enterprising foe would not be slow to take advantage.

While few of the regular warships of a Mediterranean Power would be likely to be encountered east of Port Said, there would be plenty of scope for activity by raiders of the "Moewe" and "Wolf" type in the Indian Ocean and on the long stretch between the Persian Gulf and the Cape. When the tankers turned northward and crossed the Line they would come within range of the enemy's big, ocean-going submarines, possibly working from bases on the West African coast. Thenceforward the utmost vigilance would have to be exercised until the precious oil-freighters were safely berthed in their terminal ports.

All this, it may be objected, would merely entail a repetition of the general measures that were taken for the protection of shipping in the last war. That is true only in part. The conditions I am now attempting to portray would differ radically from those we had to face on the previous occasion. We might be dealing with a foe who, unlike Germany, remained in full possession of his overseas bases lying on the flank of important trade routes—unless we blithely assume that the capture of the enemy's colonial possessions would be effected with the same relative ease and rapidity as they were in the Great War.

This assumption I believe to be unwarranted.

Digitized by Google

We should probably have our hands too full to engage in a series of oversea expeditions demanding in sum a lavish expenditure of man-power and tonnage, and for reasons which it would be invidious to set down here the conquest of any colonial empire other than Germany's would involve us in amphibious operations of prohibitive magnitude. It will therefore be more prudent to reckon with the existence of hostile bases in several of the areas traversed by our shipping, upon which submarines and other warships would pivot. This circumstance will give a keener edge to the *guerre de course* of the future and vastly complicate the problem of defence.

Nor can we comfortably anticipate having to deal with submarine raiders working under the same limitations as the German U-boats. The latter, with few exceptions, were too lightly armed to engage in artillery duels with well-protected convoys, besides lacking the sea endurance necessary to extend their operations very far afield. But there are now afloat a great number of foreign submarines which are free from these handicaps. It should be understood that the following examples are mentioned only because they illustrate this point.

The French submersible cruiser *Surcouf* is far more powerful than any undersea craft that took part in the Great War. Her radius of action is 10,000 miles; she is armour-plated against gunfire, and in addition to fourteen torpedo tubes she

Digitized by Google

carries two 8-in. guns which discharge shells of 271 lb. weight. The *Surcouf* would thus be capable of engaging with success any convoy not escorted by the most powerful cruisers, and as her 8-in. weapons are immensely superior in range and destructive power to the 6-in. guns to which defensively-armed merchantmen—and all the new British cruisers as well—are restricted by treaty, her potentialities as a commerce destroyer are unlimited.

Japan has several submarines of great radius, mounting two 5·5-in. guns, and the United States has in the *Narwhal*, *Nautilus*, and *Argonaut* big submarine cruisers built for overseas service and armed with a pair of 6-in. guns. Any of the vessels mentioned could make short work of the average convoy that sailed in the Great War. What a big well-armed submarine raider could achieve was demonstrated by Arnauld de la Perière in the *U*139, a vessel of 1,930 tons and 17½ knots speed, mounting two 5·9-in. guns, and by other German officers in the few really large U-cruisers that were completed before the Armistice. One of these vessels boldly attacked a convoy, and after disabling the escort ship with a few well-placed 5·9-in. shells, spread death and destruction among the merchantmen.

It is a fact worth noting that only about twenty U-boats over 1,000 tons were finished in time to take part in the German submarine campaign. All the rest were craft of 800 tons or less. Though the nominal radius of action was considerable,

Digitized by Google

their small dimensions and cramped accommodation imposed a severe strain on the personnel, and in spite of the long voyages which some of them made they were not ocean-going submarines in the modern sense of the term.

Since the War there has been a marked increase in the size of submarines. Of boats exceeding 1,000 tons France has over forty, Japan almost as many, and Italy and the United States twelve each. Many of the Japanese boats have displacements of 1,630 to 2,000 tons and a surface speed of 19 knots. It is clear that any of the vessels enumerated must have sea-keeping qualities far superior to those of the average German U-boat. Therefore, having regard to the great increase in the submarine's strategical mobility and offensive power, it is pretty obvious that the counter-measures that proved effective against undersea raiders in the last war would not suffice in a future emergency.

This point has been stressed by Rear-Admiral S. S. Hall, who as Commodore of Submarines in the late war speaks with high authority.

> "It appears quite certain (he states) that the most serious menace to our Empire in the future lies in an attack on our trade by means of submarine cruisers in conjunction with submarine torpedo vessels. Such a campaign will further modify the experience of the last war in that the auxiliary patrol as we know it by swarms of small, lightly-armed craft will

Digitized by Google

not be available, for you cannot keep such vessels out without support on the spot when submarines with a good 6-in. armament are liable to come to the surface at any time." *

In view of the new conditions established, *inter alia*, by the big, ocean-cruising submarines, armed with guns of 6-in. or greater calibre, Admiral Hall is dubious as to the future value of convoy.

"One great objection to it is, that it relieves the attacker from all obligation to carry out the laws as to visit and search of ships and the removal of the crews to a place of safety before destroying a prize. From the moment we put our trade into convoy, the German submarine attacks on them became perfectly legitimate. The presence of an armed cruiser or destroyers as escort implied an intention to resist, while the practice of steering a zig-zag course was an actual act of resistance.

"The collection of ships in convoy enormously speeds up losses if the convoy is intercepted by superior force, and since it appears that our chances of blockading a hostile Fleet again are remote, we arrive at the unfortunate result, of which we have no experience at all, that whereas submarine cruisers which may be

* "The Potentialities of the Torpedo," *Brassey's Naval and Shipping Annual*, 1921–22.

Digitized by Google

met with all over the world will demand universal convoy, the very fact of putting ships into convoy will legitimise the torpedoing of ships without warning, will enormously facilitate night attack by surface and submarine cruisers and day attack by enemy cruisers in force, since so many convoys can never be adequately protected." *

So far, then, as the defence of trade is concerned, the experience gained in the last war would appear to be much less useful as a guide to future procedure than is commonly supposed. We do know, however, that our present naval strength would be inadequate even to cope with a commerce-raiding campaign similar to that conducted by the Germans from the outbreak of war to December, 1916—that is, before they launched the unrestricted U-boat attack with vast reserves of new material. In the face of an offensive by large submarine raiders with cruiser armament any counter-measures that might be improvised would certainly prove ineffectual, and it is difficult to see how we could escape crippling losses.

The protection of oil supplies is, of course, only a part—albeit a vital part—of the larger problem. It must, however, be recognised that we have committed the entire Navy and a substantial proportion of the mercantile marine to dependence

* " The Potentialities of the Torpedo," *Brassey's Naval and Shipping Annual*, 1921–22.

Digitized by Google

upon a fuel of which an adequate supply cannot be guaranteed in time of war. That momentous fact, coupled with the notorious shortage of cruisers, destroyers, and other types essential to the defence of floating trade, should be sufficient to disturb the slumbers of all thoughtful citizens of the British Commonwealth.

Digitized by Google

CHAPTER VIII

NAVAL OFFICERS IN THE MAKING

WHEN the Navy Estimates for 1931 were introduced by the Socialist Government the First Lord of the Admiralty observed, apparently with some complaisance, that a reduction of 10,000 had been effected in the Navy's personnel within four years. As a contribution to disarmament this was, no doubt, a great achievement, and one for which the Socialists were by no means solely responsible. Their administration, in fact, was only continuing, though more drastically, the policy of whittling away our naval assets which had been initiated by previous Governments. In this respect all parties in the State were tarred with the same brush. Not until 1933 was a determined attempt made to arrest the process of attrition. That year may have marked the turn of the tide.

It is a truism that the quality of its personnel determines the fighting value of any armed force. By this test the British Navy stands very high. Patriotic pride may tempt us to accept as a matter of course the pre-eminence of our naval officers and seamen, but we should avoid the error of under-estimating the personnel of other fleets. The better way is to assume a common standard of

Digitized by Google

efficiency for the first-class navies of the world, in personnel no less than in material, even if it be undeniable that the long-service system by which the British Navy is principally manned gives it an advantage over others in which enlistment is for much shorter periods. Only in Germany is the period of naval service for ratings equal to the British twelve-year term.

Standards of discipline must needs vary according to national temperament. In pre-War days the German naval rating was ruled with an iron hand, but though this draconic system would not have worked in the case of British bluejackets it produced remarkable results. For the first two years of the War the German sailors were second to none in steadiness under fire, resourcefulness, and professional skill. It was only beneath the strain of prolonged inactivity, with all the boredom and none of the amenities of peace-time harbour routine, that the system broke down.

The methods of discipline now practised in the Royal Navy are probably the best that human wisdom could devise. To understand them it is necessary to live for a time in the naval atmosphere, to learn by personal contact the respective viewpoints of wardroom, warrant and petty officers' mess, and broadside mess. When that has been done one realises how few are the real grievances that remain to be remedied. Beneath the usually good-humoured "grousing" of the lower-deck there is deep-seated pride in and loyalty to the

Digitized by Google

Service. I do not propose to psycho-analyse the modern British bluejacket, that model citizen, whose self-control, devotion to duty, and fitness of mind and body set an example well worthy of emulation; but it is certain that the British nation produces no finer type.

Relations between officers and men are nowadays almost uniformly good and are based on mutual respect. In the light of full knowledge it can be stated positively that naval officers had little or no responsibility for the affair at Invergordon in 1931. What happened on that occasion was due, almost entirely, to departmental bungling in London. The average naval officer spares no effort to promote the welfare and general interests of his men. It is notorious that the strong representations made by senior officers of the Fleet during and immediately after the War were mainly instrumental in raising the pay of the lower-deck.

In the course of a long and fairly intimate association with the Navy I have never met an officer who did not cherish a high opinion of the bluejackets. Having regard to the peculiar conditions of the Service, discipline is and must always be fairly strict, but it is not harsh. At any rate it brought the whole Navy triumphantly through the grilling test of fifty-one months of war, in which the effects of monotony were more to be feared than the shells and torpedoes of the enemy.

The existing system of entering and training

Digitized by Google

naval officers comes under criticism from time to time, and apparently with justification. It rests on the principle that a youth cannot be moulded into the Navy's ways unless he is caught young. He therefore enters Dartmouth in his thirteenth year and there receives a somewhat mixed education which, in the opinion of many competent judges, is not consistent with a high standard of intellectual development. It is not from persons outside the Service but from officers who are themselves the products of Dartmouth that one hears the strongest criticism of the present system. A great many of these officers make no secret of their preference for the public school special-entry type who does not join the Navy until his seventeenth year. He is, they say, better educated and therefore mentally more alert than the Dartmouth boy, and, if anything, more enthusiastic about his future career.

In connection with the latter point it is hardly to be disputed that a certain proportion—large or small—of the boys who go to Dartmouth between the ages of $13\frac{1}{3}$ and $13\frac{2}{3}$ must eventually realise that they have made a false choice of a career. To live contentedly in the Navy is impossible for anyone without the right temperament, and an officer who is not happy in his profession is an acquisition of dubious value to the service. How many of us at the age of thirteen had evolved a definite plan of life? Probably not five in a hundred. The ideals of that age usually undergo

Digitized by Google

drastic change in the course of a few years, and the youth of seventeen must often look back with amazement at the values he cherished at thirteen. His mind is now more mature, and, more often than not, out of the vague and manifold longings of boyhood there has emerged a reasonably clear purpose. If, therefore, he elects to become a naval officer, it is because he feels this to be the profession for which he is best fitted. That, no doubt, accounts for the high percentage of special entry cadets who distinguish themselves in after years.

But the thirteen-year-old boy who enters Dartmouth cannot possibly have such a definite goal in view. He may have been placed there to carry on a family tradition, or he may be under the glamour of a Service which does appeal, and quite understandably so, to the romantic instincts of every British youth. Be that as it may, once entered, he is for all practical purposes a fixture. Not only would it require immense moral courage on his part to confess to disillusionment, but a decent boy would be swayed by the knowledge that to apply for release would be to impose a heavy burden on parents or guardian.

These, it is officially decreed, " are required to undertake, on the entry of a cadet, that in the event of his withdrawing or being withdrawn from the College (Dartmouth) or the Navy before being confirmed as a sub-lieutenant, or before reaching the age of 21, whichever is the earlier, they will

Digitized by Google

pay, if demanded, the sum of £40 per term in respect of each term passed by him in the R.N. College from the date of entry to the date of withdrawal, as a contribution towards the balance of the cost of his training and maintenance not covered by the fees charged." As the period of training at Dartmouth is eleven terms, it will be seen that to withdraw a boy from the Navy except in the earliest stage involves a financial penalty which may well be severe to the average parent in these straitened times.

The question of whether or no the Dartmouth system is to be continued is one of crucial importance to the Navy itself and of considerable moment to the public at large. Expediency and economy both enter into it, but expediency must, of course, be given first place. If it could be proved that to close Dartmouth and depend on the public schools for its future officers would be detrimental to the Navy, then Dartmouth would have to be maintained at all costs. But it is just that proposition which excites controversy within the Navy itself.

The present Board of Admiralty (1934) is pro-Dartmouth, and since it consists entirely of officers, including the political head, who passed through the Britannia–Dartmouth system of training and whose careers have been of high distinction, its judgment cannot lightly be set aside. On the other hand, there are many senior officers, active and retired, also with distinguished careers, who

Digitized by Google

believe Dartmouth to be an anachronism. Two quotations may be given to illustrate the opposing points of view. The first is taken from a speech by Sir Bolton Eyres-Monsell, First Lord of the Admiralty and a Commander, R.N., on the retired list, when introducing the Navy Estimates for 1933 :—

> " I for one," he said, " am convinced that we should never get a sufficient number of cadets of the right calibre in any other way (than through Dartmouth). The only criticism aimed against Dartmouth which I thought had some force in it was the one directed against the cost of Dartmouth, so I set to work to reduce the cost and undermine that argument as best I could."

These are the words of one who after serving many years as a naval officer went into public life and attained high rank in the political world. Dartmouth certainly has reason to be proud of Sir Bolton Eyres-Monsell, and if all its products were of the same calibre every criticism of the system might be silenced.

But let us listen to another voice, that of Vice-Admiral Gordon Campbell, V.C., M.P., who earned his laurels in Q-ships, a service that probably provided the most searching test of those qualities demanded in the naval officer. Speaking in the House of Commons in March, 1933, he said :—

Digitized by Google

"We now have officers entering through Dartmouth College or alternatively through the special entry. If one is better than the other, why have two? If Dartmouth College is better than the special entry, presumably those who go into the special entry must know that their chances of promotion in the years to come are less than in the case of those who go through Dartmouth. My own experience, having commanded both Dartmouth cadets and public school cadets, leaves me no hesitation in saying that public school cadets make better officers than Dartmouth cadets. The initial training is far superior.

"Dartmouth is run, and must be run, under dual control. There are a captain and a headmaster. Co-operation in control, in certain circumstances and in certain conditions, undoubtedly works well. . . . At Dartmouth the headmaster is there for a considerable number of years, while the captain is changed every two or three years. I do not think that is an efficient way of running a training establishment, nor do I know any other training school or public school which is run on dual control. Another advantage of taking cadets only through the special entry is that the Admiralty would not have to look so far ahead in regard to the number of officers that will be required. The Dartmouth entry is four years earlier than the

Digitized by Google

special entry, which means that the Admiralty has to look four years further ahead in the matter of lieutenants and commanders than it does with the special entry.

"I have heard it said that the public schools do not encourage boys to go into the Navy. There is a certain amount of truth in that, but that could be overcome. If schools knew that the special entry was the only form of entry into the Navy, and if the ages were adjusted, it would be more simple and would suit the schools better. Naturally, at our best schools it is not likely that the best boys who are good in Rugby or cricket would be taken away just when they are getting into the first eleven, but that is only a matter of about six months' adjustment. A boy in the special entry is older and knows his mind better as to whether he wants to go into the Navy or not."

Sir Bolton Eyres-Monsell, it will have been noted, thinks that the only criticism against Dartmouth which carries weight is that which relates to the cost of the system. But it is not on that score alone, nor even primarily, that the critics base their case. Elaborating the arguments employed by Vice-Admiral Campbell, they maintain that the average intellectual standard of the public school naval cadet is definitely above that of the Dartmouth boy—and this, let it be repeated, is

Digitized by Google

the judgment of a great number of flag officers and captains who are themselves products of the Britannia–Dartmouth system. Broadly outlined, their case is as follows:—

The typical thirteen-year-old boy who enters Dartmouth is too young to know his own mind. He has entered because he is attracted towards a naval career in deference to family tradition, or by a natural love of the sea, or by the romantic appeal—which is very strong—of the Navy itself. Of these motives the first two are more likely to retain their force than the third, but even they do not always continue to dominate the mental and temperamental development of the boy. Between the ages of thirteen and seventeen values are apt to undergo drastic revision. If all the professions were recruited on the Dartmouth system of assuming that a boy of thirteen and a half had definitely decided on his life's career, and if subsequent withdrawal were hedged about with similar restrictions, what a singular assortment of divines, physicians, lawyers, and soldiers we should have!

Few will question the value of the spirit of discipline and devotion which Dartmouth inculcates, and many will wish that it might be extended to the entire youth of the nation. But what the critics of Dartmouth do contend is that any boy who has completed four years at a sound public school has imbibed the principles of discipline while escaping the intellectually cramping effect

Digitized by Google

of a purely service régime. Excellent though the Dartmouth curriculum may be on paper, it is taught in an atmosphere that is entirely naval. Therefore, unless the cadet be a boy of such pronounced intellectual independence as to be immune from this atmosphere—a *rara avis* indeed! —his mental processes must inevitably be coerced into a well-defined groove.

For the years he spends at Dartmouth are followed by a long period in the gun-room of a battleship or cruiser, where the mental environment is practically the same, even if it be a little more sophisticated. And when in due course he attains to ward-room rank he finds himself surrounded by contemporaries and seniors who have been brought up in exactly the same atmosphere and whose intellectual life is guided by the same traditions and the same inhibitions. "We all talk the same language," as a modern naval officer might aptly say.

If the naval art resolved itself into the performance of certain duties by rule and rote this sort of training would, no doubt, be admirably adapted to the purpose in view. But although a certain school in the Navy does appear to think that a gunnery, torpedo, navigation, or engineer officer who keeps abreast of progress in his particular speciality, or a non-specialist officer who performs deck duties efficiently and knows how to handle his men, represents the ideal type for the Navy, this view no longer finds general support.

Digitized by Google

It is, indeed, controverted in every page of naval history. Few will deny that the power to think clearly and logically is the secret of all fine craftsmanship, alike in the avocations of peace and war.

Every earnest student of history is sensible of the injustice that is done to the great captains of ancient and modern times by the methods of the "popular" historian. Their more spectacular achievements are exhibited in a blaze of limelight, while the reader is told little or nothing of the brilliant staff work which alone made possible the grand climax. How many years of study of the broad principles of tactics and strategy, how many hours of intense mental concentration on the task of applying those principles to the problem of the moment, contributed to the winning of great battles? Thanks to the patient researches of conscientious historians we know that every victorious leader, from the very first that emerged from the shadows of antiquity, owed his triumphs at least as much to intellectual powers as to an inborn capacity for command.

In essence the aim of liberal education is to cultivate the faculty of thinking coherently, to encourage the mind to receive new ideas without prejudice and to test their worth as solvents of the problems of life. Whether a system of education conducted in an atmosphere heavily charged with tradition, and therefore antipathetic to novel ideas, can achieve that aim, is open to doubt. In the nature of things an old-established institution

Digitized by Google

is inclined to view with suspicion that which is new. It may pay lip service to the desirability of encouraging initiative, but in practice its methods of teaching tend to produce the contrary effect.

The Dartmouth system, according to its critics, lacks the stimulating mental influence of a good public school. Its discipline is that of the Navy, excellent for adults, no doubt, but scarcely suited to the juvenile temperament. Nobody questions the officer-like qualities of the typical Dartmouth cadet, who has been taught that self-control which is the first qualification of those who aspire to command others. What is doubted is whether he has been trained to think independently not only about subjects remote from his profession, but even about those that are intimately associated with it. That is where the special entry cadet is believed to have the advantage.

From thirteen to seventeen he has been educated not with a view to his entering any one profession —which inevitably entails a certain concentration on more or less mechanical matters of routine—but with the object of equipping him with the mental powers that alone bring success in any vocation which demands ordered thought. Many senior officers unite in affirming the superiority of the special entry cadet to the Dartmouth product in general knowledge, and, above all, in the mental dexterity that enables an officer to cope efficiently with any circumstances out of the normal.

It is true that the root principles of strategy are

Digitized by Google

immutable. But those principles are notoriously subject to varied interpretation, and the successful strategist is he who confounds his opponent by adroit gambits and moves which may be unconventional, and even unorthodox, without being contrary to the basic rules of the game.

One example will suffice to illustrate the point. For more than two centuries after the introduction of marine artillery the orthodox method of fleet combat was to steer a course parallel with the enemy and endeavour to crush him either by sheer weight of numbers or superior rapidity of fire. Those who fought in this manner dimly apprehended the first lesson in the manual of strategy —to concentrate strength where the enemy is weakest—without having the vision to apply it with maximum effect. Then, at length, the idea was conceived of breaking through the enemy's line and so bringing isolated portions of his force under overwhelming fire. This was what Rodney did at the Battle of the Saints. It was certainly a departure from convention, but it was nevertheless the simplest, most logical, and therefore the most effectual interpretation of a basic principle.

It is impossible in a brief chapter to do more than indicate the leading arguments for and against continuation of the present system of entering and training officers for the Royal Navy. The subject is, however, one of such vital importance that its ventilation cannot do other than good. Primarily, of course, it is a service matter, and the

Digitized by Google

civilian who becomes a strong partisan of one system or the other is guilty of presumption. At the same time it is a subject of considerable national importance, for upon the efficiency of its sea-officers the fate of the nation may one day depend again, as it has so often depended in the past. For this reason the public would welcome a wider expression of views on the merits and demerits of the present system by senior officers of the Navy who are in a position to speak.

One of the most stimulating contributions to the discussion in recent years is Admiral Sir H. W. Richmond's "Naval Training," published in 1933. His arguments in favour of modifying conditions of entry and training betray the ripe scholarship, and are presented with the lucidity that characterise all his writings, and his criticism is constructive throughout. He has built up a formidable case for reform, and one that has yet to be answered by the Dartmouth school.

A few excerpts from Admiral Richmond's important book may be permissible. After quoting officers of distinction who have criticised the loss of individuality "which is inevitable when all young gentlemen are passed through the same course from the age of twelve years," and from long-continued running in the same groove, he adds:—

> "Of late years complaint has frequently been made that the boys who come to sea

Digitized by Google

are lacking in initiative. It would indeed be most surprising if they were not; and the more surprising still if they should develop it at sea when they are continually under instruction, spending all the hours of the day in listening to lectures or performing mechanical tasks."

Many of those who believe in the necessity of entering cadets at thirteen and a half years urge that unless a boy is caught young he cannot be expected fully to absorb naval traditions. On this argument Admiral Richmond comments as follows:--

"Traditions are of many kinds. There are traditions of behaviour, of discipline, of courage, of loyalty. There are literary traditions. There are traditions of tactics, of strategy, of war. Which of these are those which can be imbibed only at an early age? The great moral traditions of love of country, subordination of self, loyalty, discipline, and courage are common to all fighting services. The soldier, or the Marine officer, who completes his education at a public school, possesses these qualities as fully as the sea-officer. They are indeed . . . the heritage of our imperial race. As no naval officer would think of claiming for his own service superiority in these qualities over another service, it cannot be for the moral traditions that early entry is believed to be necessary.

Digitized by Google

> " Is it then for tradition in another sense—for learning the tradition of the sea, the story of the fighting at sea? This can hardly be the reason, for but little of it is taught in the naval college. Time does not allow of much instruction in naval history. In the other fighting service it has not been considered necessary to specialise in military history before the age of eighteen. . . .
>
> " Finally, there are the traditions of tactics, strategy, and war. But these form no part of the curriculum at the (Dartmouth) college, nor has early entry succeeded in maintaining them, otherwise we should not have witnessed some of the wide departures from traditional principles of strategy and tactics which characterised the last war, and were the causes of so many heavy losses."

The final trenchant sentence is amplified in a foot-note, which reads :—

> " All the traditional methods of trade defence —in particular ' cruising ' and ' convoy '— were thrown aside ; and as a consequence the war was within an ace of being lost at sea. Every tradition governing the conduct of ' conjunct expeditions ' was thrown to the wind in the operations against the Dardanelles. Even the traditional British way of making war was rejected."

Digitized by Google

To the unbiassed student this indictment of what, for want of a better name, may be termed the staff work in the naval operations of 1914–18 seems only too well justified. The War seemed to catch the naval mind unprepared. Plans had been drawn up, it is true, but they appear to have rested on the premise that only the expected would happen. And thanks to the extraordinary lack of enterprise exhibited by the German naval command nothing unexpected did occur for a long period. But when at length events at sea did begin to diverge from the conventional course, there was an obvious and inordinate delay in adjusting our plans to meet them. The evidence suggests either that the best brains in the Navy were preoccupied with problems of material—as witness the vast but ill-conceived programmes of new construction put in hand during the first six months—or that they were not adequately represented on the staff.

Beyond such fantastic schemes as a mass incursion into the Baltic, the bombardment of Heligoland, and the seizure of Borkum, no plans seem to have been drawn up for compelling a reluctant High Seas Fleet to accept battle. The very fact that a certain school of naval thought still insists that no particular advantage would have accrued from the destruction or crippling of the German battle fleet indicates how far naval teaching has departed from the robust principles of other days. It is difficult to imagine any officer who had

Digitized by Google

intelligently studied naval history upholding such a thesis.

Other outstanding examples either of defective staff work or the inculcation of false principles, or of a combination of both factors, are the Dogger Bank action, Jutland, and the strange North Sea affair of November 17, 1917—this last-named action being the subject of unusually pungent comment in the official history of the naval campaign.

It would, therefore, be unwise for defenders of the system of naval officers' entry and training which has been in force for so long to rest their case on the Navy's staff work in 1914–18. They might quite legitimately point to the magnificent record of the Navy as a whole during those years, its devotion, its discipline, and its fortitude which brought it through every ordeal. But in the case of the Navy those virtues are surely taken for granted, and to emphasise them only strengthens the argument of those who urge a higher intellectual standard for the naval leader of to-morrow. The moral qualities of the British Navy's personnel are such as to make it invincible under competent leadership. Therefore it should be the cardinal aim of naval education to turn out officers who are both morally and intellectually qualified to command. The growing volume of criticism from within the Navy itself seems to suggest that the present system of training officers stands in need of reform.

Digitized by Google

CHAPTER IX

BRITAIN'S BLUNDER AT WASHINGTON

PREVIOUS to 1921 the limitation of navies by international agreement had been an ideal often sought but never achieved. As long ago as the 'seventies and 'eighties of last century, when Anglo-French naval rivalry was becoming acute and the junction of an allied Franco-Russian fleet in the North Sea was a permanent bugbear of British statesmen, peace advocates on either side of the Channel occasionally proposed to place a check on naval shipbuilding by mutual agreement. Nothing was done, however, and eventually the Hamilton Naval Defence Act of 1889 placed British supremacy beyond dispute, thereby preserving the peace of Europe for twenty-five years.

British statesmanship in those days usually preferred action to rhetoric and gestures, and the results seem to have vindicated their choice. The current notion, which is said to have originated in Ireland and has since spread over most of the world, that if John Bull is kicked sufficiently hard he will yield anything, had not then taken root. British lives and property in foreign countries had never been so secure since Commonwealth times, when Admiral Blake gave point to Cromwell's

Digitized by Google

dictum that none save Englishmen should punish Englishmen. By modern standards Cromwell and Blake were "Jingoes," but at least they understood how to make their country's name respected and how to secure for her a fair deal.

A few years before the Great War the British Government made a sincere effort to terminate the Anglo-German naval race, which was obviously going to lead to war if it were not checked. Lord Haldane was sent to Berlin with proposals liberal enough to have satisfied Germany had she not already made up her mind to become as powerful at sea as Great Britain. Admiral von Tirpitz so worked on the Kaiser's vanity—"Would Majesty permit the English to dictate how many ships he may build?"—that the negotiations were doomed before they began. The lesson they taught was the futility of putting the cart before the horse. Moral disarmament must precede the limitation of armaments. When Lord Haldane visited Berlin Germany was working herself into the state of truculent hysteria which precipitated matters in July, 1914. It was impossible to reason with her in that mood, but it should go on record that the British Government of the day did do its utmost to check the fateful naval race.

Less than two years after the Great War another shipbuilding competition was in full swing, this time between the United States and Japan. It was due in part to racial bickering, and in part to America's concern about the future of her Asiatic

Digitized by Google

trade. Japanese action in China and Manchuria during 1914–18, when practically all the rest of the world was preoccupied with the struggle in Europe, led the United States to fear that the "open door" was about to be slammed in her face.

There was, however, a third motive, equally potent if much less obvious. Whilst unintelligent people in England plaintively asked what the British Navy was doing, keen-sighted observers in the United States and Japan were watching with admiration and envy the tremendous effects of naval predominance. They realised far more clearly than our own people that while military power might alter the fate of realms and republics, sea power alone was capable of determining the destiny of continents.

The antecedents of the first conference for the limitation of naval armaments, held at Washington in 1921–22, have been fully investigated, and need not be recapitulated here at length. Suffice it to say that the United States and Japan were committed to huge building programmes which virtually balanced one another. The financial burden was almost breaking Japan's back: half her revenue was being spent on the navy in 1920–21. The American nation, too, was beginning to revolt against such prodigal expenditure on battleships, and it was already doubtful whether either programme would be completed in its entirety.

Meanwhile Great Britain, much against her will,

Digitized by Google

found herself drawn into the race. Were all the giant ships then on the stocks in the United States and Japan to be completed her own fleet would be rendered obsolete, a contingency which could not be tamely awaited. Our interests in the Pacific and the Far East were at least equal to those of the United States, and common prudence counselled the necessity of maintaining the balance of power. For this reason alone, and in no spirit of hostility either to America or Japan, we set about the formidable task of rebuilding the fleet. In 1921 Parliament voted four capital ships larger and stronger than any then building abroad, and four other great battleships were planned for the following year. This was the situation when President Harding summoned the Washington Conference.

In so far as it reduced the bulk of existing programmes to waste paper and saved vast sums of money, the Conference was an outstanding success. But it did more than that: it put an end to the development of new naval bases in the Pacific, and thus diminished the probability of war by interposing a vast tract of inhospitable ocean between would-be combatants. Two nations separated from each other by thousands of miles of sea may quarrel, but they are less likely to come to blows than if their frontiers marched together. So much, then, must be placed to the credit side of the Washington Conference.

But its results were not wholly beneficent. No

Digitized by Google

one was really satisfied. The United States, it is true, had secured formal recognition of her claim to naval equality with Britain, but her people were not at that time prepared to pay the price of implementing the claim. So a new demand was raised. Instead of the United States building up to Britain's level, Britain was to reduce down to the American level. For five years after the Conference this demand continued to be pressed with ever-growing insistence, and to provide a common grievance for all the anti-British elements in the United States.

It is no more than the truth to assert that ever since 1921 the United States has been attempting, more or less consciously, to dictate the naval policy of Great Britain. In vain have well-meaning people on both sides of the Atlantic emphasised the disparity between British and American naval requirements: on the one hand an empire scattered over the globe, its members absolutely dependent on sea power for inter-communication, nourishment, and defence; on the other, a compact, self-contained, and highly-organised State, so geographically isolated as to be beyond the reach of aggression on a serious scale.

Were national policies guided solely by logic, the case for a great American navy would be difficult to support on any grounds other than those of national aggrandisement and prestige, while the case for a supreme British navy would be unassailable. It should, however, be made

Digitized by Google

plain that there is nothing culpable nor perverse in America's desire to possess a navy equal, if not superior, to any other, nor is she to be blamed for trying to attain equality without the expense of heavy building. The United States, like every other country, puts its own interests first, though diplomatic convention may forbid a blunt avowal of the fact.

There are several perfectly good reasons why a great navy is useful to her, even though it may not be essential from the viewpoint of self-preservation. It enhances her prestige as a world Power and adds weight to her influence in the council of nations. It is available either as a shield against attack, remote as that contingency seems to be, or as a sword for maintaining her foreign policies in the teeth of any opposition. Her growing mercantile marine and her important overseas trade might be cited as further cogent reasons for a strong navy.

Much controversy and not a little ill-feeling would have been avoided had American champions of naval expansion built their case on the arguments outlined above. As it was they chose to conduct a propaganda which reflected on the good faith of Great Britain and Japan, picturing their country as standing in grave peril from one or other of those Powers, or even from both together, unless the American fleet were substantially reinforced. No doubt this scaremongering was more effectual than reasoned argument, but it has not contributed to the harmony of nations. This is

Digitized by Google

so well recognised that the "big navy" group is regarded with strong disapproval by a multitude of thoughtful Americans.

But British critics are by no means blameless in this matter. Too many of them have written as though it were unpardonable presumption on America's part to want a strong navy at all; still worse, they have employed an argument which never fails to exasperate even moderate American opinion: namely, that as long as Britain remains supreme on the seas America is quite safe and need not worry. Even if this were true, which is by no means certain, it is scarcely the type of argument to impress a proud and somewhat sensitive nation.

Equally misguided are those British critics who upbraid America for enlarging her mercantile marine, pointing out in minatory language that there are quite enough British ships to carry comfortably the bulk of America's foreign trade, if not the whole of it. They deem it wicked of the United States to build a mercantile fleet large enough not only to make herself independent of foreign tonnage in the event of another European war, but to provide that reserve of auxiliaries which would be indispensable to her navy in time of war.

Lectures, homilies, and admonitions have been flying to and fro across the Atlantic ever since the Washington Conference, and no good has come of it all. Perhaps it is only the wisdom born after the event, but one suspects that the whole business

Digitized by Google

of naval limitation has been wrongly handled from the start. When America first demanded "parity" we should have concurred without an instant's hesitation. Fixed ratios in certain ship categories may have been unavoidable, but we ought never to have left the determination of those ratios to America, as to all intents we have done. Restriction on the "global tonnage" principle was much the more rational solution, and in discussing the tonnage quotas we should have kept steadfastly in mind our unique responsibilities in respect of naval defence. To do this would not have necessitated endless arguments to prove that our "actual requirements" were greater than those of the United States.

A global tonnage figure which, in the opinion of the Admiralty Naval Staff, would give us a reasonable margin of security for the future should have formed the basis of our negotiations. To America we could have said: "We have not the slightest objection to parity; it is your undisputed right. To facilitate matters we will submit a tonnage maximum which roughly conforms to our narrowest future requirements, and we hope you will see your way to adopting the same figure. It does not follow that we shall forthwith proceed to build up to this limit; on the contrary, we propose to construct each year only such ships as our experts consider to be necessary. Unless other Powers embark on large programmes we shall probably find it permissible to keep somewhat below the agreed maximum."

Digitized by Google

Had we taken this line it is not improbable that America would have met us half-way. Such, at least, is the opinion of British observers who were in close touch with the Washington Conference proceedings. True, the American plan submitted by Mr. Hughes on the first day of the Conference laid down fixed quotas for every category of warship, but there is nothing to suggest that this plan was put forward in a "take it or leave it" spirit. The Conference had met, indeed, in an atmosphere of goodwill, and there is no reason to suppose that counter-proposals of a moderate nature would not have been received in an accommodating spirit by the American delegation and considered on their merits. As events fell out the question of quotas for vessels other than capital ships and aircraft-carriers never came to the point of serious discussion, owing to the French attitude on submarine restriction.

Nevertheless, Great Britain ought to have seized the opportunity of pointing out to the United States, first, that total tonnage limitation was preferable to rationing by ship categories; and, secondly, that in either case we should require ample time in which to consider so portentous a matter as our future naval strength. There is no evidence that either of these points was brought to the notice of the United States.

By neglecting to do this we tacitly conceded her implied right to determine the future dimensions of foreign navies, our own included, and since even statesmen are but human the American

Digitized by Google

Government of that day assumed, perhaps only half-consciously, the rôle of arbiter in the world's naval affairs—a tradition which has been faithfully carried on by their successors. Certain unfortunate effects of this attitude will be discussed in their place.

The Washington Conference, as I have said, unquestionably eased a situation in the Pacific Ocean which was fraught with grave menace. It met at a time when the United States and Japan were not only building warships wholesale but feverishly developing outlying bases, the completion of which would have brought the two fleets within easy striking distance of each other. That peril was averted by the non-fortification clause embodied in the Treaty. In an earlier work * I explained the significance of this clause in the following words :—

> " Before the Conference reciprocal measures were being taken to overcome the physical obstacles which rendered a meeting between the two fleets all but impossible. Since Hawaii, the westernmost American naval base, was 3,375 miles from Yokosuka, the most easterly Japanese base, there were no apparent means by which the rival fleets could be brought into contact, having regard to the very limited radius of modern warships. But

* " Navies and Nations," by H. C. Bywater. (Constable, 1927.)

Digitized by Google

America was preparing in 1921 to convert the island of Guam into a great war haven, and at the same time to equip the arsenal of Cavite, in the Philippines, with docks and magazines for battleships.

"As Cavite was 1,740 miles from the Japanese coast and Guam only 1,360 miles, modern base facilities at these two points would have enabled the American fleet to conduct operations in Japanese waters. Japan, on her side, was hastily fortifying the Bonin Islands, which lie only 800 miles to the north of Guam. Had these plans reached maturity the distance separating the two fleets would have been reduced by three-fourths, thus rendering a decisive encounter perfectly feasible. . . . So long as it (the non-fortification compact) remains operative the potential war harbours at Guam, Cavite, and Port Lloyd (in the Bonin Islands) cannot be built. This means that the American and Japanese battle fleets are again divided by a vast stretch of ocean, which in the absence of friendly bases neither can traverse under war conditions."

It is no exaggeration to say that the Washington Naval Treaty established peace in the Pacific Ocean for an indefinite period. Whether the safeguarding clause in question will be renewed from time to time, or confirmed in perpetuity, remains to be seen. Probably it will remain in

Digitized by Google

force unless or until some crucial issue arises between America and Japan, and even then the knowledge of the physical obstacles to a decisive clash presented by the absence of overseas bases would be apt to weigh in the scale of peace.

There is a school of thought in the American navy which believes that very large battleships could serve the purpose of floating bases in a trans-Pacific war, and it is largely due to the influence of this cult that the United States has declined, as yet, to accept any modification of the existing standard of 35,000 tons for battleships. Naval opinion in other countries unanimously dismisses the " floating base " theory as chimerical.

It might reasonably be supposed that the elimination of the war danger would have improved relations between America and Japan, and no doubt for a time it did so. Japan, however, was dissatisfied with the result of the Conference. The Nationalist Press minimised her gains and magnified her losses, while the militarist element which at that time held a commanding position in Japanese politics laid stress on the arrogance of America in seeking to dictate to the Island Empire. Popular feeling was so inflamed by this agitation that when the Japanese delegates returned home the authorities thought it advisable to give them police protection. Things were made no better by the widespread unemployment that resulted from the cancelling of so many ships.

In the end, no doubt, wiser counsels would

Digitized by Google

have prevailed, ushering in a new era of friendship between the two nations. Unfortunately, at this critical juncture the explosive racial issue intruded itself again. The Japanese "invasion" of the Pacific slope, that ancient but ever-ripe apple of discord, was alleged to have become a serious menace, and strong representations were made to Congress by members from the Western States concerned. The fact that a Presidential election was impending may have been responsible in part for the subsequent decision to tighten up the Asiatic immigration laws. While legislation to this end was still before Congress, the Japanese Ambassador in Washington wrote a memorandum in which he referred to the "grave consequences" that might ensue if the new bill were passed.

His words may not have been too happily chosen, but they certainly did not bear the ominous interpretation that was ascribed to them, sincerely or otherwise, by Congress and Press. This so-called Japanese "threat" evoked a storm of indignation, at the height of which Congress passed a much more drastic bill than that which had been contemplated. Had literal effect been given to the new statute it would have been virtually impossible for any Japanese, irrespective of class or quality, to enter the United States.

Japan felt, not without reason, that she had been grossly affronted. An ugly situation threatened to develop, for the less temperate newspapers in both countries indulged in provocative language

Digitized by Google

and many indiscreet speeches were made by public men on both sides. Gradually the tempest subsided, for it soon became clear that the United States was not enforcing the strict letter of the law in respect of Japanese visitors. Nevertheless, a real and possibly a permanent mischief had been done.

The Japanese are a proud race, and their memory is long. One striking illustration of this may be recalled. Shortly after the Sino-Japanese War of 1894–95, which had left Japan in control of the Liaotung Peninsula, she was peremptorily ordered to vacate this territory by Russia, Germany, and France acting, for once, in concert. Nearly twenty years later—on August 15, 1915, just after the Great War had begun—Germany received from Japan a notice to quit the territory of Kiaochao, this ultimatum being couched in the identical words which Germany had addressed to Japan when ordering her to evacuate the Liaotung Peninsula. Obviously, therefore, Japan does not forget an injury however ancient, a fact which all exponents of "shirt-sleeves" and "big stick" diplomacy might do well to bear in mind.

But the repercussions of the Washington Conference were by no means confined to Washington and Tokyo. It was natural to suppose that with the scrapping of the huge pre-Conference building programmes and the regulation of navies to a graded standard of strength in the most formidable ships, relative strength would cease to be a bone of contention. Oddly enough, the Washington Treaty

Digitized by Google

had the reverse effect. Previous to 1921 naval policy had never been a controversial issue between Great Britain and the United States. Since that date, however, it has been a source of friction, never very severe, perhaps, but still sufficiently perceptible to disturb from time to time the even tenor of their relations. The circumstances leading up to the abortive Naval Conference at Geneva in 1927, and the proceedings at that Conference, made it impossible any longer to doubt that each Power was keeping a sharp eye on the other's naval affairs.

Another unforeseen yet, in the nature of things, inevitable result of the Conference was the establishment of naval rivalry between France and Italy. In drawing up their plan for graduating the strength of the world's principal fleets the United States Government had bracketed these two Powers together, thus implying their complete equality in the maritime sphere. Italy, of course, raised no objection, but France was less complacent. As her spokesmen promptly protested, the naval armaments of Italy had never yet approached in magnitude those of France, nor had Italy ever before laid claim to equality. France, they pointed out, fronted both the Mediterranean and the Atlantic, and besides her long and divided seaboard she had a vast colonial empire to protect. On the basis of maritime responsibilities and needs it was therefore absurd, they contended, to treat the two countries as uniform.

Into the prolonged and acrimonious debate

Digitized by Google

which raged about this question it is not necessary to enter. What really matters is that if Italy did not go to the Washington Conference as France's avowed competitor on the sea, she certainly left it in that character. It is, however, but fair to add that both M. Briand, the original head of the French delegation, and M. Sarraut, who took charge when his chief returned to France, had definitely accepted in principle the Italian claim to equality. As this fact has since been disputed by French critics it is necessary to quote official evidence.

Speaking at the Conference on Dec. 17, 1921, M. Sarraut said :—

> " The French delegation had come to the Conference trusting fully the friends who surrounded them. This was the spirit in which they had accepted the principle of equality with Italy. In regard to this principle no figure had been set. Italy was free to construct any amount (of naval tonnage) up to the limit claimed by France, or to remain below that limit if she saw fit, since Italy had not, as France had, extensive colonial possessions to control."

On December 23 M. Briand, as Premier and Minister for Foreign Affairs, addressed to M. Sarraut at Washington a telegram which contained the following passage :—

> " As far as Italy is concerned we make no

Digitized by Google

objection to her having the same figure for light vessels and submarines as us, but we do not admit that the figure which she demands shall form a basis for fixing ours."

All things considered, the political results of the first naval conference were unfortunate. Peace it may have promoted—for a time—but it hardly brought goodwill. The angry dispute between British and French delegates on the submarine question; the wordy warfare that developed between France and Italy, and the various controversies, involving Great Britain, the United States, and Japan, to which the execution of the Washington Treaty gave rise: these were the political sequelæ to that historic assembly which had been summoned with the loftiest intentions. Even now, after the lapse of so many years, it is hard to decide whether more good than harm resulted from the Conference. That remains an open question to which the future must provide an answer.

Digitized by Google

CHAPTER X

EFFECTS OF ONE-SIDED DISARMAMENT

LOVE and war are not the only spheres of activity in which the end is held to justify the means. Politicians of a certain school appear to consider it quite legitimate not merely to ignore or even flatly to deny a demonstrable fact, but to persist in asserting that which they know to be untrue. Naval disarmament furnishes a case in point. Every intelligent person who takes the slightest interest in current affairs knows that within recent years the British Navy has been scaled down far more drastically than any other.

The fact is proved up to the hilt by statistics accessible to everybody, and it has been the theme of innumerable statements in Parliament supported by figures plain enough to carry conviction to the dullest mind. Yet there are British politicians who do not hesitate to declare that their own country is the chief obstacle to world disarmament. Unless they are mentally unbalanced, they must be aware that this is a falsehood. Such electioneering methods are deplorable enough when confined to matters of domestic policy; to extend them to issues of the gravest international moment is nothing less than criminal.

Digitized by Google

The post-War years have witnessed the decline of the British Navy from absolute supremacy to subordinate rank. During this period we have built less combatant tonnage than either the United States or Japan, and fewer light craft—destroyers and submarines—than either France or Italy. Our naval personnel has been so retrenched that it now stands many thousands lower than the United States total and barely level with that of Japan. In combatant aircraft we now rank fifth among the Powers.

In consequence of this long-continued process of disarmament, unaccompanied as it has been by similar action on the part of any other Power, the British Navy of to-day not only cuts an unimpressive figure on paper, but is actually well below its paper strength. That is because the dearth of new ships has made it necessary to keep in service a large number of vessels which have passed the age limit and are therefore overdue for the scrap-heap. By 1936 nearly two-fifths of our cruisers, over one-half of our destroyers, and one-half of our submarines will be obsolete.

Now, for a warship to be obsolete means that she is no longer capable of performing efficient service in war. That was the dearly-bought lesson of experience in 1914–18. The *Pegasus* was shot to pieces by the *Königsberg* at Zanzibar because her antiquated machinery had broken down and her old-fashioned guns were useless at long range. The *Good Hope* and the *Monmouth* were summarily

Digitized by Google

destroyed at Coronel because their armament was out of date and their hulls were packed with inflammable woodwork. In modern naval warfare deficiencies in material are punished with merciless severity. To keep obsolete vessels at sea is to invite not only defeat but the massacre of gallant men.

Bad as the position is to-day, it will be worse a few years hence, for every important navy except our own has been practically rebuilt since the War. If we became involved in hostilities we should have to send old ships to fight brand-new ones. At the present time we have more than a dozen cruisers and over a hundred destroyers which could not meet their foreign "opposite numbers" on equal terms. Too slow to escape being brought to action, and carrying guns of obsolete design, they would be foredoomed to defeat by all the rules of the game. Certainly the public at large does not realise what a bloody price our naval men may one day have to pay for national economy. If a sudden crisis were to arise there would be no question of sending out only the best and latest ships to guard the trade routes and protect the nation's "bread line."

Everything that could float and steam would be requisitioned. In every dockyard men would be toiling night and day to make ready for sea the ancient vessels that represent our sole reserve. Cruisers that received their baptism of fire in the North Sea nearly twenty years ago would be painted, furbished up, fuelled and munitioned, manned with drafts and reservists, and hurried to sea in

Digitized by Google

the shortest possible time. In peace days it takes about six months thoroughly to "shake down" a ship which has been laid up for a long period or is fresh from the builders' hands. In war no such breathing space would be permissible.

Let us imagine the case of an apocryphal ship H.M.S. *Caerleon*. Early in 1917 this smart little cruiser, of some 4,000 tons, joined the Harwich Force on her maiden commission. Only four weeks previously had she begun her trials. Officers and men were still new to one another, but under the stress of war conditions they were settling down and the ship was finding herself. Between that date and the Armistice the *Caerleon's* life was distinctly hectic.

A German torpedo blew off most of her bows and a German mine demolished most of her stern. And except for visits to the dockyard to make good these injuries or to tune up her over-strained machinery she was never at rest. Always at short notice, she put in more service every month than would be required of her in a year of peace. Had the War continued for another year or two the *Caerleon* must either have been laid up for a prolonged refit or else incontinently scrapped, for she was pretty well at the end of her tether.

But the Armistice intervened, and with others of her type the sorely-tried cruiser, prematurely aged by nearly two years of active service, underwent a fairly extensive refit and incidentally received a number of extra "gadgets" which added substantially to her displacement. Her engines and

Digitized by Google

boilers were patched up, but not replaced, the result being that the added weight knocked several knots off her original speed, and although still listed as a 29-knot ship she could not now exceed 26 knots with safety. She still carried five 6-in. guns. After her refit the *Caerleon* did several years of duty with cruiser squadrons in the Mediterranean and the North Sea. In 1927 she was transferred to the Reserve, and for the next eight years steadily deteriorated in structure, machinery, and equipment while propping up a dockyard wall.

Then the war clouds broke; every available ship was needed, irrespective of age or condition; and a month later H.M.S. *Caerleon* was on patrol in the Atlantic. She was barely half the size of any hostile cruiser likely to be met with, she carried only half the weight of metal, and was a good eight knots slower. One day, while she was acting as escort ship to an important convoy, a suspicious vessel was sighted. The *Caerleon* took up her appointed station and watched the stranger approaching at phenomenal speed. In a few minutes she was identified as a brand-new Ruritanian cruiser of 8,000 tons, with a designed speed of 34 knots and a broadside of nine 6½-in. guns.

True to the traditions of the British Navy, the *Caerleon* prepared for action, at the same time ordering the convoy to disperse. Every soul in the cruiser knew that, barring a miracle, there could be only one end to the forthcoming duel. Subconsciously, perhaps, they felt themselves the victims of political aberration, but their duty was plain.

Digitized by Google

The action was over in fifteen minutes. Thanks to his great margin of speed and the superior range of his guns, the initiative remained with the enemy throughout.

The *Caerleon* was straddled at the third salvo, and thereafter the 120-pdr. shell rained upon her. With engines crippled and her decks littered with dead and wounded men, she drifted helplessly, her battle flags still flying and the one or two guns that remained intact keeping up a slow fire. A few hits were scored on the enemy ship, but her retaliation was so overwhelming that the British cruiser crumpled up and sank like a stone, taking with her four hundred and fifty officers and men. Then the raider proceeded to " shoot up " the convoy at his leisure.

That this is no alarmist phantasy, but a sober forecast of what might, and probably would, happen not once but many times in a war of the near future, is easily proved by comparing a typical British over-age cruiser now on the active list with one of the latest productions from a Continental shipyard. Here are the essential data :—

	British ship.	Foreign ship.
Launched . . .	1917	1933
Displacement, tons . .	4,190	8,000
Speed, knots . . .	26	34
Guns	Five 6-in. (old)	Nine 6-in. (new)
Gun range, yards . .	14,500	25,000
Weight of broadside, lbs. .	500	1,107

Digitized by Google

The foreign ship tabulated above is by no means the most powerful specimen of current foreign construction. The United States, for example, is building two distinct types of cruiser: the first a 10,000-ton ship, well armoured, with a speed of 33 knots and a battery of nine 8-in. 250-pdr. guns; the second, also a 10,000-tonner, of 33 knots, well protected, and armed with fifteen 6-in. 105-pdr. guns. Japan is building six cruisers of 8,500 to 9,000 tons, 34 knots speed, and an armament of fifteen 5·5-in. or 6·1-in. guns. Each and all of these types so completely eclipses the best of our over-age cruisers that a comparison of fighting values would be pointless. Even our latest cruisers afloat or still on the stocks are, with rare exceptions, inferior to these foreign contemporaries.

While the British public does not yet appear to realise the extent to which its naval defences have deteriorated, foreign observers are fully alive to the situation. Not long ago a well-known American journalist wrote that "the British Navy exhibits all the symptoms of what some would call a decline, but which really seems to be galloping consumption." In American naval and political circles it is openly said that Neptune's trident has dropped from the once-powerful but now nerveless hand of Britannia. In the service journals of Japan, France, Italy, and Germany, the British Navy is usually classed as second to the navy of the United States and barely equal to that of Japan. All over the world, literally from China to Peru,

Digitized by Google

the waning of British sea power is the theme of comment.

Is it any wonder, then, that our influence on the course of world events is perceptibly weakening? For well over a century and a half we have claimed to be the moderating factor in international politics because, secure in the knowledge of our strength, we could afford in many cases to take a broad and detached view of international problems. If foreign Powers apparently bent on war yielded, as they often did yield, to our veto, it was less out of love for us than respect for our might, the most visible and most dreaded expression of which was the British Navy.

But since we have allowed our strongest arm to become decrepit, we cannot expect our views to receive the same consideration as before. Nor do they receive it. No oratory however grandiloquent, no gesturing and posturing however persuasive, will ever be effectual substitutes for a squadron of British battleships. Rhetoric may sometimes cause war, but there is no historical record of it as a preventive of war.

The decline of British influence in the councils of the world is obvious to all save certain public men who appear to be intoxicated with their own eloquence.

> " Is it not significant," said Viscount Lymington recently, " that when at last Germany has blown the breath of reality through the fog, our newspapers should take for granted

Digitized by Google

that Germany can care less for our pleasure or displeasure than the attitude of Italy towards her? When, since we were a stout nation with a Navy upon which we could rely in all contingencies, would any newspaper have dreamt of considering any other nation's opinion in foreign policy more important than our own?"

There are optimists who believe that Great Britain is still fulfilling her traditional rôle of moderator in the world's affairs, but they are the people who would substitute parchment bulwarks for the iron ramparts of national defence. They are the people, not merely ignorant of history but completely blind to the dynamic forces that shape the destiny of individuals and nations, whose child-like faith in the efficacy of talk is touching but dangerous. For many years now they have been in control of British policy at home and abroad. What are the results?

On their own admission the state of the world to-day is little better than it was in the fateful year of 1914. There is, however, this difference. In 1914 Great Britain was striving desperately to preserve the world's peace. There are many who retain the profound conviction that a little more assurance, a touch of the "quarter-deck" manner in place of the incorrigible courtesy, if not actual diffidence, of modern British diplomacy would have staved off war in 1914.

Digitized by Google

For at that time the British Navy was still one of the weightiest factors in the international balance of power. On at least three occasions in the previous thirty years it had prevented a breach of the peace. But in the critical days of 1914 British statesmen did not feel at liberty to warn the chief incendiaries, in language as forthright and as positive as Palmerston or Salisbury would have used, that if they persisted in their designs they would have to reckon with the full might of British sea power.

To-day, as in 1914, Great Britain is striving desperately to preserve peace, but the eloquence of her statesmen, being no longer backed by the ships and guns of a supreme navy, is therefore less impressive. It is not for an instant suggested that her influence in world politics has become negligible. She still has great resources at her command, sufficiently great to make her a valuable friend or a formidable enemy. Nevertheless, her voice no longer carries the weight it did in former times. Prolonged neglect of the national defences has made her more vulnerable than she has ever been since the Dutch entered the Medway, and, knowing her to be vulnerable, neighbours and rivals are not disposed to accord her views the respect they received when the British Navy ruled the seas and the British Isles were inviolate.

No nation desires peace more sincerely and fervently than ours, none is more conscious of the futility of war as an instrument of national policy. In so far as the efforts of British statesmanship

Digitized by Google

have been directed towards the preservation of peace they deserve the highest commendation. The object is wholly praiseworthy, and it commands the support of every right-minded citizen of the Empire. But the method offers a fair field for criticism. It is the considered judgment of many foreign observers, not all of whom are unfriendly, that as a nation we have become "soft." That is almost certainly a libel, though at times it may seem to bear the stamp of truth.

Those who are regarded abroad as our intellectual leaders have preached, a little too loudly perhaps, the virtues of pacifism in its least noble form. Ancient universities and venerable institutions which are supposed to enshrine the traditions of the British race have become, or seem to have become, the pulpits of doctrines of political philosophy which a former generation would have bluntly condemned as pusillanimous. Some of our most brilliant men of letters of the younger school have written books and treatises to prove that man's highest duty is the preservation of his own skin.

None of these phenomena escapes the vigilant eyes of our foreign friends and enemies. They do not realise, as we do, that modern methods of publicity often amplify the squeak of a faction into the voice of a nation. And therein lies grave danger. It will be a bad day for the world if and when the other nations, or any single nation that happens to be in truculent mood, come to the conclusion that

Digitized by Google

the British people has so far lost its self-respect that it may be flouted with impunity. The true war-mongers are the so-called pacifists who tell the world that in no circumstances will Britain's men fight for their country, for there are many foreigners who accept this calumny at its face value. There could be no greater encouragement to potential peace-breakers.

Equally pernicious is the type of politician who, on the one hand, is always trying to cut down the defence services, and, on the other hand, is constantly meddling in the affairs of foreign nations. This is the brand of "bloodthirsty pacifist" whose mentality defies analysis. During the War he was a defeatist. After the War he became violently anti-French and missed no opportunity of gratuitously insulting our late ally. When the Fascist movement triumphed in Italy his impertinence found a new target in Signor Mussolini. Germany enjoyed the dubious privilege of his admiration until the Nazi upheaval excited his facile indignation and set him clamouring for "sanctions," which is a euphemism for acts of war. For years past he has been striving to make bad blood between ourselves and Japan, and there is plain evidence that the anti-Japanese campaign waged by our pacifists is responsible in no small measure for the perceptible cooling of Anglo-Japanese relations.

Fortunately there are signs of a public awakening to the perils of a policy which aims at rendering the

Digitized by Google

country well-nigh defenceless and simultaneously making it an international busybody. True pacifism consists in maintaining adequate defences and abstaining from unnecessary interference with our neighbours. There can be little doubt that our efforts on behalf of peace would be far more fruitful if we felt ourselves secure and other countries knew us to be too formidable to be slighted.

It is now admitted by responsible men of all parties that a blunder was made in retrenching the defence forces before we obtained a guarantee of reciprocal action by other Powers. The effects of this blunder have become painfully obvious. As we reduced, others increased, so that to-day our relative strength at sea is less than it has been for two centuries. We have thus reached a position which finds us devoid of assets with which to bargain for disarmament with our neighbours. Worse still, we have made it very difficult to restore our armaments to safety level without incurring a charge of inconsistency, if not of hypocrisy.

Although the glaring deficiencies of the Navy have been apparent for several years, and although every British statesman must be alive to the serious risk which this state of affairs involves, little has been done so far to remedy the matter. What, then, is the explanation? That our administrators are so lacking in their elementary duty of safeguarding the nation that they are content to watch with passive

Digitized by Google

cynicism the progressive decay of our defences is a theory which every rational citizen must reject. They are probably as good patriots as any of their predecessors. It is their judgment, not their loyalty, that invites criticism.

Unquestionably the cardinal reason why successive Governments have failed to maintain the Navy at proper strength is the fear that any determined move in this direction would compromise the prospects of world disarmament. For several years after the Washington Conference of 1921–22 this apprehension was probably well-founded. During that period Great Britain and the United States began little or no new construction, hoping, no doubt, that their self-imposed holiday in the building of light naval craft would be shared by the other Powers. In this they were disappointed. Large programmes of cruiser, destroyer, and submarine construction were launched in Japan, France, and Italy, these being the types on which the Washington Treaty had imposed no limitation.

At length, in 1924, a British Socialist Government was so impressed with the importance of maintaining the equilibrium at sea that it authorised the building of 50,000 tons of cruisers. In the following year a Conservative Government introduced a five-year programme, the principal items of which were nine "A" class (10,000-ton) and seven "B" class (8,400-ton) cruisers. This scheme was short-lived. Only six of the "A"

Digitized by Google

ships and two " B's " were laid down, the remainder being cancelled.

The year 1927 brought the Geneva Naval Conference between the British Empire, the United States, and Japan. France and Italy were invited, but both declined with thanks. The Conference was a failure. The British delegation held out for a minimum of seventy cruisers, and there was much wrangling with the American representatives on technical questions of tonnage and gun-calibre. The Japanese members wisely held aloof. In the end nothing was settled, the only useful result of the Conference being the revelation that the United States was determined not only to uphold her claim to naval parity with the British Empire, but to dictate the future strength of both fleets.

It was now that British statesmanship should have stood firm, pointing out to Washington the unreasonableness of this new pretension and reiterating the Empire's right and duty to make such provision for its naval defence as seemed necessary and permissible within the existing Treaty limits. Had this course been taken we should have gained the respect of the United States without forfeiting her friendship.

Instead, we initiated the fatal policy of " gesturing." Under the 1927 programme three cruisers were to have been started, but it was decided to delete two of them. This was the first gesture. The three cruisers contemplated for 1928 were cancelled *en bloc*, and of the trio authorised for the

Digitized by Google

following year only one was built, and that of a diminished type.

If the object of this Quixotic procedure was to encourage naval disarmament by other Powers it has failed egregiously. In the seven years which have passed since we substituted a dreamy idealism for the robust common sense which had hitherto directed our naval policy, every other maritime Power of importance has largely augmented its fleet. The process has gone too far to be dismissed as a coincidence. On the contrary, the facts admit of only one conclusion: the outer world, seeing Great Britain purposefully surrendering the weapon which had made her an imperial Power of the first magnitude, and whose incalculable potency had been demonstrated anew in the years of Armageddon, was only too willing to relieve her of its weight. For centuries past she had tutored them in the theory of sea power, all the while retaining the practice in her own firm hands. Now, if those hands had become palsied, as seemed certain, the erstwhile pupils were more than ready to relieve their ancient mentor by taking her burden, and her profits, upon themselves.

History may yet have to record it as a fact that a new era of world-wide naval rivalry opened when the British nation turned its back on the sea. It is not too late to repair the flagrant errors of the past ten years, but the sands are running out. This country has made a gigantic sacrifice to the cause of disarmament, only to find she has com-

Digitized by Google

mitted a gigantic mistake. Now is the time to mend matters. Bitter experience has taught us that neglect of our own navy invariably promotes the aggrandisement of foreign navies. Competitive building has never been so universal as it is to-day, when Britain has virtually dropped out of the race. Paradoxical as it may seem, our post-War policy of unilateral disarmament at sea has been the direct cause of the naval renaissance which is now evident in almost every quarter of the globe.

There are still many well-meaning Britons who would have us persist in this tragic policy. They are affrighted at the suggestion that we should put our maritime defences in order without further regard to any save ourselves. To do this, they expostulate, would create a bad impression abroad. Such arguments were well enough ten years ago, when we had just embarked on the bold experiment of one-sided disarmament and were perforce compelled to await its result. Since then we have been fully enlightened.

The experiment has been an utter failure. Short of accepting permanent inferiority in the naval hierarchy—and that would mean the eventual disintegration of the British Empire, the forfeiture of all our influence in the world's council chamber, and ultimate danger to our liberties if not to our lives—we have no alternative but to rebuild the fleet. If it be contended that such action would be provocative, the answer is that almost every

Digitized by Google

Power of maritime importance is already building new ships to the limit of financial capacity.

Alike in Japan, France, and Italy current naval budgets approach the maximum of which the national purse is capable. Even in the United States the enormous sums now being spent on the construction of warships are causing uneasiness in economic circles. There is, in fact, not the slightest reason to suppose that a new British programme designed to maintain the Royal Navy at a one-Power standard, or, in the new jargon, at parity, would evoke a response in the form of more intensified building by one or other of the Powers. If, in face of all probability, this did happen, then at least we should know from what quarter to anticipate a direct menace.

We can start to rebuild our Navy with a clear conscience, having done everything humanly possible to further the cause of disarmament. If we try to do more we shall not only injure that cause, but gravely imperil international peace by rendering ourselves incapable of defending it. The intelligent pacifist cannot better serve the cause he has at heart than by urging the restoration of British naval power. A new Naval Defence Act, providing the battleships, cruisers, and other craft necessary to bring us back to a one-Power standard, would be the sublimest and most practical gesture this country could make to demonstrate its abhorrence of war.

Digitized by Google

CHAPTER XI

SEA AND SKY: BRITAIN'S CLIPPED WINGS

As I explained in the opening chapter, the purpose of this book is to present the case for an adequate British Navy as one of the principal safeguards of peace. But I qualified my thesis by insisting on a sufficient measure of air power as the condition precedent of any really satisfactory system of national defence.* To be prepared at sea and unprepared in the air would be to leave matters no better than they are at present. If the nation's spirit were broken by the sustained air bombardment of London and other densely-populated centres, no victories at sea could stave off capitulation. Conversely, complete air supremacy and consequential immunity from bombing raids would be of no avail if our Navy proved incapable of guarding the nation's food supplies.

There is an unfortunate tendency to regard the Navy and the Air Force as rival services, the one competing against the other for public favour and the financial support which popularity confers. If that were really the state of affairs it would be a bad thing for the country.

* Since this chapter was written, H.M. Government have decided to reinforce the Royal Air Force by forty-one squadrons during 1934–38.

Digitized by Google

Because the Navy is an ancient institution and the Air Force a comparatively new one, a certain degree of jealousy between the two is perhaps inevitable. But if this sentiment still exists it is yearly becoming more tempered by mutual respect and admiration. A few senior officers of the Navy may still look askance at the Air Arm, professing to doubt its utility for any save " stunt " purposes, just as some very junior flying officers have been known to dismiss our veteran admirals as " fossils " and the Navy itself as a back number.

But between the more responsible members of both services there is growing appreciation of their complementary nature. After all, the Navy, by spending huge sums on the building of aircraft-carriers and encouraging the development of the Fleet Air Arm, has shown itself alive to the value of air power. The demand for more ship-borne aircraft comes from the Fleet itself, and naval officers, with few exceptions, are anxious to see all battleships and cruisers equipped with catapults, despite the inconvenience of these engines in their present cumbrous form. The Navy is fully aware of the value of aircraft for reconnaissance, gunnery control, and anti-submarine work, and its complaint is not that the Fleet Air Arm receives too much attention, but that its growth has been stunted by shortage of funds.

Admirals and commanding officers as a whole take a grave view of our meagre resources in naval aircraft. They do not need to be told that in

Digitized by Google

time of war a fleet deficient in air power would labour under a severe handicap which very possibly might prove fatal. Marked superiority in this weapon confers the gift of vision on one's own fleet while condemning the enemy to blindness. Moreover, while the offensive powers of the air arm against war vessels other than submarines are still somewhat problematical, the balance of evidence furnished by peace-time exercises justifies the conclusion that torpedo-planes and bombers attacking in mass might intervene decisively in a fleet action between forces otherwise well matched. It follows, therefore, that a one-Power standard in naval aircraft is the least we should strive to attain.

At the present time we are far removed from it. Statistics taken from the *Armaments Year Book* of the League of Nations and other reliable sources reveal a truly disturbing state of affairs. In naval aircraft we are heavily outnumbered by every other first-class Power, the adverse odds being, in one instance, eight to one.

There are six aircraft-carriers on the Navy List, their capacity for accommodating machines being as follows:—

Courageous	52 aircraft
Glorious	52 „
Furious	36 „
Eagle	21 „
Hermes	15 „
Argus	15 „
Total number	191 „

Early in 1934 none of these vessels had its full

Digitized by Google

complement of aircraft on board, the total machines borne in the six ships numbering only 132. Certain capital ships and cruisers have been fitted with catapults, the intention being that each ship shall eventually carry two seaplanes, the estimated total being forty. But again the shortage of aircraft has delayed this plan, and at the present time only about twenty machines are on board the vessels in question. These, added to the aircraft-carrier outfits, bring the Navy's total of aircraft to 152. In time of war casualties among naval machines would undoubtedly be heavy, since in all probability only a limited number of those flown off from ships would be recoverable. It is therefore of prime importance to have ample reserves in hand.

But what is the actual position? The Fleet Air Arm has practically no reserve of modern machines, and it would be impossible to replace those now on board. Thus a single fleet action might deprive the Navy of fifty to seventy-five per cent. of its air power, leaving it virtually blind.

By way of contrast the United States has (in 1934) 230 machines in its aircraft-carriers and 130 in its battleships and cruisers, or 360 in all. This total will be increased to 650 in the next few years by the entry into the service of new carriers and cruisers, now building. And for every machine borne in American warships there are two in reserve.*

* A bill passed in March, 1934, authorised the addition of 1,100 aeroplanes to the U.S. Navy.

Digitized by Google

The Japanese Navy has 180 machines in aircraft-carriers and eighty in other ships, or 260 in all, and there are sufficient reserves to replace all these machines twice over.

France and Italy each possesses at least three times as many aircraft adapted to work at sea as Great Britain.

In view of these figures the necessity of expanding the Fleet Air Arm without delay is self-evident. Aircraft-carrier outfits should be brought up to full strength, and an ample reserve of machines created. When new carriers are built—one is to be laid down in 1934–35—they should be of the smallest dimensions consistent with their work. Sufficient experience must have been gained by now to enable a decision to be reached on this point. All new ships of and above the light cruiser category should be designed to carry at least two aircraft.

The problem of retrieving machines which have been catapulted from warships demands attention. One way of solving it would be to purchase a number of suitable merchant ships and fit them with multiple cranes, landing aprons, hangars, and catapults. A warship's seaplane, having completed its flight, could come down alongside one of these auxiliaries to take in a fresh load of fuel, bombs, etc., for a further flight, or alternatively, to be hoisted on board, pending an opportunity of returning to its parent ship.

To bring the Fleet Air Arm up to adequate

Digitized by Google

strength the present number of pilots and observers must be very largely increased, its personnel being at present only one-sixth of the American total and only two-fifths of the Japanese. A great expansion of the Navy's air power is no less a matter of urgency than the provision of more cruisers and destroyers. It is time the country realised that the policy of starving the Fleet Air Arm which has been pursued in past years has seriously compromised the efficiency of the Navy as a whole.

There is something rather cheap in the perpetual excuse that we cannot afford to pay for adequate naval and air defence. Other countries less well-to-do than ours have not hesitated to provide themselves with defensive armaments of requisite strength. If the British nation is, in truth, not prepared to pay the necessary price for security, it must forthwith renounce all pretensions to equality with its neighbours, resign its seat in the international council chamber, and allow its future destiny to be determined by foreign Powers. There is no alternative.

The aircraft requirements of the Navy represent, of course, only a small part of the general problem of national air defence. As I have already pointed out, though the Navy were restored to the absolute supremacy it enjoyed in former days, the country would still be far from secure. As long as one or more of the Continental Powers maintains a great air fleet, our home territory will remain exposed

Digitized by Google

to a form of invasion which would be none the less painful because it might not have the decisive effect of an incursion by hostile armies.

Just as we need a strong Navy to safeguard our supplies of food and other essential commodities, so do we need a strong Air Force to protect our land from aerial invasion. Neither service can deputise for the other. Air power alone can no more ensure the safety of the sea routes than naval power can give us immunity from overhead attack. They are no true friends to the Navy who claim that all the demands of national defence will be met by building more ships and enlisting more seamen. A world one-Power standard in naval and a Continental one-Power standard in air armament is the goal for which we must strive if we as a nation desire to achieve that feeling of security which alone can give poise, point, and weight to our foreign policy.

Great Britain well-armed and conscious of her own strength would be a mighty bulwark of peace. But a Great Britain obviously vulnerable to assault by sea and air offers a standing temptation to every truculent element abroad. Let us consider the position of this country as it would present itself to a Continental Power that had made up its mind to try conclusions with us, after having provided itself with formidable naval and air forces. Our shipping would be an attractive target for cruisers, armed liners, and submarines in the outer seas and for aircraft in the approaches to most of our southern and eastern ports.

Digitized by Google

But the prospective enemy would not confine his plan to the sinking of ships. He would detail strong air forces for raiding the docks and harbour works which are essential to the handling of shipping and cargoes. Ships in dock or moored alongside wharves; cranes, grain elevators, warehouses, fuel depôts, railway sidings, goods' yards—all these would be tempting objectives of attack.

If the requisite air forces were available and the necessary risks taken, it would be well within the enemy's power to paralyse, in the course of a few days, a large portion of our marine transport system. And when it is remembered that four-fifths of the food and raw materials we consume reach us by sea, and that there is never more than six weeks' supply of food in the country, the demoralising effect on the social structure of a resolute air offensive on the lines indicated is not difficult to imagine. It would not be necessary to lay every port in ruins. Day and night raids would speedily disorganise the working schedule, causing congestion and serious delay in the unloading and distribution of foodstuffs and materials. If the offensive continued the nation would soon find itself on short rations. From this to stark famine would be only a step.

In 1917–18 the country experienced a taste of what may be in store for it if the national defences are further allowed to decay. But although many ships were being sunk in that critical period, a sufficient number got through, and once in port they and their precious freights were safe from

Digitized by Google

further molestation. What, however, might have happened had the principal ports and railway junctions of Great Britain lain within the radius of a thousand bombing aircraft, charged with the mission of preventing at all costs the systematic unloading and forwarding of the supplies brought by these ships? Successful attacks on the port of London alone might well have reduced large areas of England to semi-starvation.

The Navy itself may be hamstrung if a future war finds us as weak in aerial armament as we are at present. Chatham, Sheerness, Portsmouth, perhaps even Plymouth, not to mention East Coast harbours listed as emergency naval bases, would all be exposed to heavy raids by bombers and torpedo-planes. Where in any of these bases could the Fleet find reasonably safe refuge? Already, and none too soon, there is talk of transferring the nation's chief arsenal from Woolwich to somewhere in the West Country. But since the position of a naval base is determined by geo-strategic factors, there would be no point in keeping the fleet off the Welsh coast if we were at war with a Continental Power. Since our naval harbours cannot be moved from the danger zone, they must be adequately defended against the new method of attack. Batteries of anti-aircraft guns will not suffice. Each base should have its own squadron of fighter machines and be provided with the technical equipment necessary to give timely warning of raids.

. . . . .

Digitized by Google

Although aircraft bombs of an effective type have been in use for nearly twenty years, very little is known about their destructive power against warships. This is both an extraordinary and a significant fact, which suggests—erroneously in my opinion—a disinclination on the part of naval men to give the new weapon a chance of showing what it can really do in warfare at sea.

It is true that certain old battleships and other obsolete men-of-war have been expended as air-bomb targets, but while the results may have been spectacular they were not particularly instructive. In nearly every case the ship attacked was motionless and the assailants had everything their own way. When a 2,000-pound bomb, dropped on an old American battleship from an absurdly low altitude, blew the superstructure to pieces and converted the vessel into an apparent wreck above the armoured deck, this wholly artificial experiment was widely acclaimed as proof that the aeroplane had conquered the battleship.

Tests of this kind are strongly reminiscent of the gun versus armour demonstrations which intrigued the naval experts of a past generation. A big gun fired its shell at an armour-plate set meticulously at right-angles to the muzzle. When, as usually happened, the projectile perforated the plate, the gunnery men solemnly announced that the gun in question would send its shell through the sides of any ship carrying armour of similar thickness. They ignored the obvious fact that in a ship-to-ship duel the chance of a shell striking

Digitized by Google

the enemy's armour at right angles was about one in a thousand; that the "Tressider formula" of penetration at the proof butts bore only the remotest relation to service conditions, and that the resilience of a floating as opposed to a fixed land target stultified all their abstruse ballistical calculations.

Yet these misleading experiments had a decisive influence on the armour protection of contemporary warships. They were responsible for such absurdities as the fitting of 24-inch armour on the sides of the old *Inflexible* and the burdening of later battleships with protective plating about twice as thick as was necessary. Millions of pounds were wasted as the result of substituting theory for practice. In those days there were plenty of obsolete ships available as targets, yet they were rarely used as such. Old sailors tell one confidentially that the Navy has a superstitious reluctance to use any of its ships, however old and useless, for experiments which may involve the destruction of the target. If that be so, it explains, but does not excuse, the infrequency of tests which alone can supply valuable lessons for the design of future warships.

To what extent men-of-war of the various categories are vulnerable to air bombs is a question to which an answer is urgently needed. We are already building cruisers to replace those now obsolete, and, in all probability, we shall soon have to begin the replacement of battleships. Are these vessels to have special protection against air

Digitized by Google

attack? And, if so, on what principles is that protection to be designed? So far as is known, the naval authorities have no precise data as to the effect of heavy-calibre bombs dropped on battleships or cruisers under conditions likely to be reproduced in war. Flour bags and small metal bombs have been launched against the wireless-controlled target ship *Centurion*, but these tests, useful as they were as an indication of accuracy in aim, have taught nothing of value to the naval constructor.

It is understood that the armour protection system of our post-War battleships, the *Nelson* and *Rodney*, conforms to the technical data furnished by experiments with the ex-German battleship *Baden*. That vessel, a thoroughly modern ship, massively armoured and bulkheaded, was subjected to 16-in. gunfire, the projectiles being of the latest armour-piercing and high-explosive types. The vaunted Krupp armour was riddled by these shells, which tore great rents on the water-line and demolished the stoutest bulkheads, speedily causing the ship to sink. As she was moored in shallow water the Admiralty experts were able to make an exhaustive examination of the damage, and upon their report was largely based the protective system of our new battleships.

There is no apparent reason why similar full-scale experiments should not have been carried out with one or more of the batch of capital ships we discarded in 1930–31, after the London Con-

Digitized by Google

ference. The *Iron Duke* was retained for conversion into a gunnery training ship, but the *Marlborough*, *Benbow*, *Emperor of India*, and *Tiger* were disposed of to shipbreakers. Had even one of these vessels been expended as a target for air bombs under realistic conditions our naval constructors could hardly have failed to obtain valuable information as to the structural damage likely to be caused by bombs of different calibre, striking at various velocities.

Commenting on the Admiralty's omission to make such experiments, certain air experts have suggested that it is not in the interest of the Navy to advertise the power of rival weapons. It is difficult to take this innuendo seriously. That the responsible heads of the Navy should have any aim other than the public interest is unthinkable, and it would be a betrayal of that interest if technical experiments were discouraged on the ground that their results might conflict with the accepted views of the service.

Battleships, cruisers, and their ancillaries are built because, in the opinion of naval experts, they are indispensable elements in the machinery of national defence. If it were demonstrated beyond cavil that air power had rendered existing warship types obsolete, and therefore useless, those who continued to urge and legislate for the building of such craft would be doing their country a disservice only one degree removed from treason. No such demonstration has yet been given. On

Digitized by Google

the contrary, recent naval exercises by British and foreign fleets have merely emphasised the subsidiary though indispensable rôle which the air weapon is destined to play in modern naval warfare.

At the same time, it is of vital importance that the ships we are now building and those to be built at a later date shall be adequately protected against air attack. On the broad ocean they have little to fear from this form of aggression, but in narrower seas the air threat may well become serious. Just as we have been at pains to make our warships reasonably secure from destruction by gunfire, torpedo, and mine, so must we endeavour to guard their vitals from knock-out blows delivered from overhead. And the technical knowledge necessary to provide this new shield can be derived only from full-scale experiments at sea. In comparison with the immense value of such data, the cost would be negligible.

Digitized by Google

CHAPTER XII

THE WRONG SORT OF NAVAL TREATY

THE system of limiting navies by international agreement has now been tried for twelve years, dating from the Washington Five-Power Treaty of 1922. That treaty was amplified and extended by the London Three-Power covenant of 1930, to which neither France nor Italy subscribed. Looking back over those twelve years, can it be said positively that naval limitation by agreement has tended to conserve peace and promote goodwill among the nations concerned?

Few will be bold enough to answer in the affirmative. Peace, it is true, has been preserved since 1922, but less on account of the restrictions of armaments than by reason of the almost universal dread of war and its sequelæ. Throughout this period the world has lived under the shadow of the last great conflict. There have been martial ebullitions in more than one country, but until recently these could be disregarded as no more than the natural vent for over-heated nationalism. Whether they may be so disregarded in the future is another question.

Twelve years ago the world's immediate storm

Digitized by Google

centre was the Western Pacific. For a variety of reasons which need not be gone into here the United States and Japan were potentially at daggers drawn. Both parties were expanding their naval armaments on a most formidable scale, and at the same time preparing, or about to prepare, advanced bases from which the two fleets could be brought within fighting range. In each case the vast shipbuilding programmes to which the United States and Japan stood committed were already costing more than their taxpayers were able, or willing, to pay, and this simple fact, skilfully camouflaged though it might be, was mainly responsible for the first attempt to check naval competition by mutual agreement.

Similar motives prompted Great Britain to support the movement. Had the American and Japanese programmes of 1921 reached fruition her own navy would have been rendered obsolete, and she must then have spent vast sums on rebuilding it to the new pattern. France and Italy were less directly interested. For the time being the battleship had ceased to play an important rôle in their schemes of naval defence, and consequently both went to Washington only mildly interested.

There, however, an unpleasant shock awaited France. She found herself placed as a naval Power on a level no higher than that of Italy, was allotted the same quota of combatant tonnage, and warned that she would be morally isolated if she refused to accept the situation. French indignation was

Digitized by Google

extreme, but protest availed nothing. Italy quite naturally declined to abandon her new status of naval equality with France, and so this question became an apple of discord between them. Although they had previously been at issue on other points, the proceedings at Washington gave a more dangerous edge to their differences.

Nor was this the only unwelcome result of a gathering which was expected to further the cause of international harmony. Hitherto Great Britain and the United States had never differed seriously on matters of relative naval strength, but since the Washington Conference this question has frequently given rise to bickering and displays of ill-temper, not entirely one-sided. The reason is not far to seek. Neither party was really satisfied with the division of strength then arranged, and each has since kept a more or less jealous eye on the other's naval activities. This vigilance is due not to any belief in the possibility of war between them, but to a common feeling—so far as the naval men are concerned—that a square deal was not forthcoming.

The Washington Treaty regulated battleship and aircraft-carrier strength only; it placed no restriction on the output of other fighting craft, whose relative value was, of course, automatically increased by the drastic numerical limitation of heavy ships. Great importance has always been attached to cruisers by the British Navy, but until recent times their development was neglected in the United States. American naval experts were well

Digitized by Google

aware that the British Empire needed a large force of cruisers for trade defence, but it was not their business to emphasise the fact. Thus when Great Britain, a few years after the Washington Conference, launched a modest cruiser programme to replace obsolete vessels, American naval critics accused us of starting a new shipbuilding race, and even declared our action to be contrary to the spirit of the Treaty. This, needless to say, was sheer propaganda, but it proved to be very effective.

As Japan had also resumed cruiser building, the relative position of the United States began to deteriorate. Soon a powerful agitation was on foot to increase American naval armaments, or, alternatively, to apply the brake to British and Japanese construction by extending the provisions of the Washington Treaty to cruisers and other craft. Exaggerated and grossly misleading statements were broadcast about British naval activities, the general effect of this propaganda, largely inspired and nourished by American armament manufacturers, being baneful to Anglo-American relations.

At length in 1927, at the instance of the United States, a new conference assembled at Geneva. Only the three principal naval Powers were represented, France and Italy having declined to attend. It is widely assumed, and often stated, that Italy's refusal was an automatic reaction to that of France. This is incorrect. The Italian Government acted quite independently, its reasons for declining the

Digitized by Google

invitation being set forth in a well-reasoned memorandum issued on February 21, 1927.

The Geneva Three-Power Conference was a failure, except in so far as it may be said to have paved the way for the London gathering three years later. Great Britain held out for a minimum of seventy cruisers, at the same time urging a drastic reduction in the permitted size and armament of these ships. The United States resisted both proposals, and in the opinion of many British observers seemed bent on dictating the future strength and composition of the British Navy to suit her own fundamentally different requirements. Finding the two senior partners at loggerheads, Japan prudently kept in the background.

The British delegates at Geneva repeatedly had evidence of some " hidden hand " that was working to wreck the Conference, and no one was surprised at the subsequent revelation of Mr. William Shearer's activities. This gentleman had been sent to Geneva as the paid agent of a group of American armament firms, with instructions to oppose any measures which did not promise to bring them large orders for ships, guns, and munitions. In view of this disclosure the breakdown of the Conference ceased to be a mystery.

It is but fair to add that the United States Congress insisted on a full public investigation of the Shearer scandal, and united with Press and public in roundly condemning the particularly sordid intrigue which the investigation uncovered.

Digitized by Google

A new chapter in the youthful but chequered history of naval disarmament opened in 1929 with the advent of the second British Socialist administration. It was well known to be the ambition of the new Prime Minister, Mr. Ramsay MacDonald, to settle the Anglo-American naval controversy once and for all. The intention was wholly laudable; it is only the means employed that invite criticism. Mr. MacDonald decided to visit President Hoover in person, to prepare the ground for a new naval parley that should obliterate the evil memories of Geneva and produce concrete results.

But before taking his departure he consulted the Sea Lords. Hitherto the Admiralty had stipulated for seventy cruisers as absolutely the smallest number by which the immense floating trade of the Empire could be safeguarded. Even this was an arbitrary estimate, much too low to be warranted either by our pre-War establishment, or our actual experience in the War itself. But at least it was a definite figure, a working basis on which to frame our future policy. As a result of his consultation, Mr. MacDonald sailed for New York with the Admiralty's consent to reduce the "irreducible minimum" by no less than twenty ships. How this consent was obtained is no mystery, though it puzzled most people at the time.

The Board of Admiralty of 1929 agreed to an eventual establishment of fifty cruisers on the express condition that all other Powers concerned reduced their cruiser fleets proportionately. That the Sea

Digitized by Google

Lords would have accepted the reduction on any other condition is unthinkable—but we shall see how the proviso was observed.

With the British cruiser demand thus modified, Mr. MacDonald evidently found the United States authorities in a compliant mood. Between them they arranged for a conference to meet in London early in 1930. Japan, France, and Italy accepted invitations, but with mental reservations which were to be clearly exposed in due season. These three Powers, and the United States no less, were to receive an agreeable surprise. They found a British delegation simply burning to make concessions. In a very short time everybody present at the conference in St. James's Palace formed the conclusion that the British Government had determined to make a success of it at all costs, " success " meaning a signed agreement irrespective of what it might cost the interests of the British Empire.

Every other delegation—American, Japanese, French, and Italian—submitted and consistently upheld proposals which were dictated solely by their respective national interests, as was their right and duty. The British delegation alone showed itself to be internationally-minded. Only once did it present a firm front, and that was when the United States representatives demanded a new battleship as a counter-weight to the *Nelson* and *Rodney*. Considering that the United States already possessed a substantial superiority in post-Jutland battleship tonnage and armament, this was

Digitized by Google

a little too much, and—as one imagines—after some moral pressure from the Admiralty, the British spokesmen refused.

But in all other respects we not only met the other Powers half-way, but walked right up their garden paths. The fifty-cruiser minimum became not our qualified but our unqualified minimum. As soon as France and Italy announced their refusal to accept any restriction on the future output of such craft, it became the clear duty of the British delegation to withdraw the offer of a minimum of fifty vessels and revert to the Admiralty's original figure of seventy. This, however, was not done. In their determination to negotiate an agreement at any price the Socialist Government committed the Navy to a fixed standard of strength which bore no relation either to its current needs or to future developments by the Continental Powers.

It may well be asked now, as it certainly was asked at the time, why the Board of Admiralty did not protest against this flagrant breach of the understanding upon which they had been induced to make the concession. Perhaps they did protest; indeed, the insertion of an " escalator " clause in the resulting treaty may have been due to their urgent representations. This clause enacts that if during the term of the treaty any signatory Power believes its national security to be materially affected by new construction on the part of a non-signatory, the former shall be entitled to augment

Digitized by Google

its naval forces over and above the treaty quota, subject to certain formalities.

But, for fairly obvious reasons, the practical value of this clause is negligible. Let us take a hypothetical case. Great Britain, observing with growing uneasiness the rapid multiplication of French cruisers and submarines, decides to invoke the escalator clause. Under the terms of the treaty she must notify her co-signatories, the United States and Japan, of her decision and give full reasons for it. Shorn of diplomatic trimmings her message would say in effect: "France is building so many cruisers and submarines that we feel our safety to be menaced and must therefore build extra ships to meet the danger." In other words, we should have to placard France as a potential enemy of the first order.

The news could not be kept a secret. It is possible, even probable, that the United States or Japan, or both, would oppose the suggested increase in British tonnage, neither being particularly concerned about the size of the French fleet. In any case the whole world would learn what was in the wind, and the effect on our relations with France may readily be imagined.

But for these considerations we should probably have brought the escalator clause into operation long since, for Continental naval building during the last four years has been on a much greater scale than was anticipated when the London Treaty was signed, and the balance of power then envisaged

Digitized by Google

has been completely upset. Receiving a deputation on disarmament in November, 1933, Mr. Ramsay MacDonald told them that " if Service advice had been followed the escalator clause would have been brought into operation eighteen months ago." In the light of this admission the safeguarding value of the clause appears to be practically nil.

Encouraged by the expansive mood of the British Government, the foreign delegations to the Conference enlarged their demands. The United States successfully upheld the extravagant standard of cruiser tonnage and armament established at the Washington Conference and secured eighteen 10,000-ton 8-in. gun cruisers, against the British Empire's thirteen plus two smaller 8-in. gun ships. Japan claimed and received, in fact if not in principle, an increase of 10 per cent. in her previous naval ratio, together with absolute equality in submarines.

France and Italy saw no reason to make any concessions worth mention, and neither would be a party to the only section of the London Treaty that counts for anything at all. Great Britain capped her policy of surrendering much for little by agreeing to complete, during the period of the treaty, only 91,000 tons of new cruisers instead of the larger aggregate to which she was entitled. No other signatory Power adopted this self-denying clause, nor has any explanation ever been given as to why we did so.

Let us now survey very briefly the aftermath of

Digitized by Google

the London Treaty. Due in part to the one-sided restraints of the treaty itself, and in part to Governmental policy, the British Navy has steadily lost ground. New construction has in no sense kept pace with the expansion of Continental fleets. Within the last four years the light naval forces of France and Italy—cruisers, torpedo craft, and submarines—have increased by at least 50 per cent., while British relative strength in these categories has progressively diminished.

Not only those Powers, but the United States as well, have produced new and formidable cruiser designs which Great Britain, bound hand and foot by the self-imposed shackles of the treaty, is debarred from emulating. We have had to content ourselves with building comparatively small and feebly-armed ships which could not possibly hold their own against the latest foreign productions.

By November, 1933, the disparity between our latest cruisers and those building abroad had become so pronounced that counter action could no longer be delayed. It was accordingly announced that two cruisers of the current year's programme would be built to a displacement of 9,000 tons instead of 7,000 tons, but, owing to our meagre allowance of replacement tonnage under the treaty, this increase in size was made possible only by reducing the 1933 cruiser programme from four ships to three. For the first time in modern history the British Navy has deliberately built a number of ships which are definitely inferior in

Digitized by Google

size, armament, and general fighting value to foreign contemporaries.

Great Britain pledged herself not to exceed, for the duration of the treaty, 150,000 tons of destroyers. Assuming an average displacement of 1,350 tons, which is slightly below that of our latest vessels, this would give us a total of 111 destroyers, a number absurdly inadequate for any serious emergency. Out of this total would have to be provided destroyers for screening duty with the battle fleet and cruiser squadrons, for convoy and escort, and for anti-submarine operations. In the event of war with a major Continental Power we should find ourselves opposed by seventy to 100 submarines. With only 111 destroyers all told—not more than seventy of which would be available at a given moment—we should be in no position to cope with this huge undersea force.

To have accepted any limit on our destroyer strength while neighbouring Powers remained free to build submarines without stint was downright folly, not in the least mitigated by the so-called "escalator" or safeguarding clause. The consequences are what might have been expected, except that they are more grave. For every new destroyer launched in this country since the London Treaty two new submarines have gone afloat from Continental yards. To-day, therefore, the potential submarine menace is infinitely more serious than it was five years ago, and an immediate war would find our floating trade vulnerable to an extent that

Digitized by Google

was never reached in the most critical period of the German U-boat onslaught.

Nor was this the only handicap we voluntarily imposed on our capacity for naval defence when we signed the London Treaty. In common with the United States and Japan, we agreed to build no destroyer larger than 1,500 tons, with the proviso that 16 per cent. of our aggregate tonnage might be invested in craft of 1,850 tons, to be known as flotilla leaders. These dimensions are ample in themselves, and no objection could be raised provided they had a universal application.

But that is not so. France, not being a party to the Three-Power Treaty, continues to build as "destroyers" ships of nearly 3,000 tons, with a cruiser armament. These formidable craft, of which thirty-one are built or building, are light cruisers in all but name, and would be perfectly capable of acting as commerce raiders on the high seas, where they would make short work of any ordinary destroyer. We possess no corresponding type, nor could we produce it without encroaching on our already slender margin of cruiser tonnage.

Finally, if submarines are definitely of value as a counter to under-water attack—as experience in the Great War seemed to indicate—we have surrendered the right to develop this means of defence on an adequate scale by restricting our submarine tonnage to 52,700 tons. Again, it should be emphasised that neither France nor Italy is subject

Digitized by Google

to any restriction in regard to the building of submarines, except that they have agreed to construct no new boat larger than 2,000 tons.

So much, then, for the irrational and obviously dangerous restraints which the London Treaty imposed on the British Navy. It is true that in the technical sense most of these disabilities are shared by the United States and Japan; but those countries are so geographically situated that neither has reason to be seriously perturbed by the expansion of light cruiser and submarine forces in Continental Europe. Vast oceans separate the United States and Japan from the nearest foreign Powers which they may regard as possible enemies.

This country, however, is less fortunately placed. There are foreign naval bases within a few hours' steaming from the English coastline, while others closely flank highways, such as the Mediterranean, which are vital arteries of our trade. That is why we cannot view with the same complaisance as the United States and Japan the rapid growth of European naval forces. Our position is analogous to that in which Japan would find herself if Russia and China were already naval States of some magnitude and were busily multiplying fast light cruisers and ocean-going submarines.

Happily the London Treaty expires on December 31, 1936. Attempts to promote its renewal in the present form, from whatever quarter they may be made, should be firmly resisted. Already this covenant has struck at British sea power a blow from

Digitized by Google

which it may never recover. Were it to remain in force for a further term of years we should be left virtually defenceless, a tempting prey to the first strong aggressor. It is decidedly to the interest of certain foreign Powers to perpetuate the London Treaty as it stands, for the excellent reason that the treaty covers them from risk at the expense of the British Empire.

But before the question of renewal arises a further naval conference is to be held—some time in 1935. This may well prove to be a crucial year in our national history. Upon the decisions taken then will depend the scale of Britain's armed strength at sea in an age of international unrest.

In recent years the perils of one-sided disarmament have been brought home to our people. They are not prone to panic, but they realise with justifiable anxiety what their situation would be if Europe were to flame into war to-morrow. They know that neither the Navy nor the Air Force is strong enough to deter attack, still less to ward it off, or even to safeguard our neutrality in a European quarrel from which we wished to stand aloof. Britain's vulnerability is appreciated even more clearly by foreign Governments and war staffs. They must be amazed that a nation with so much at stake should consistently pursue a policy of unilateral disarmament in a world that is armed, or re-arming, to the teeth.

The explanation most generally accepted abroad is that Great Britain is becoming decadent and

Digitized by Google

deliberately relinquishing her greatness " through craven fear of being great." Foreigners who know us best hesitate to endorse that view; nevertheless, it has obtained wide currency, and is palpably responsible in large measure for the cool reception of our peace and disarmament overtures in foreign capitals. It is unfortunate that Britain's supreme diplomatic effort to exorcise the spectre of war should be made at a time when she is least able to defend her own frontiers. We cannot justly blame the intelligent foreigner for refusing to credit us with disinterested motives.

Living as we do in an age of iron realism, it seems worse than futile to attempt to mould the policies of other nations, virile, purposeful, and intensely nationalistic, by oratory at home and hat-in-hand pilgrimages abroad. These tactics are alien to British tradition, and their net result to date has been a decided slump in British prestige.

Early in 1934 a German newspaper unkindly recalled an expression coined in Berlin during the War to denote the intellectual-pacifist-defeatist group in Great Britain which—unwittingly, it is charitable to assume—was doing its best to play Germany's game. By the German high command these people were labelled " softies," and orders were issued to the effect that they were to be encouraged and supported by all possible means. It is now hinted by the German Press that the destinies of Great Britain are again in the hands of the " softies," and what the Germans with character-

Digitized by Google

istic bluntness are actually saying, others are doubtless thinking.

This is, of course, a gross calumny on our modern statesmen, who at all events are only pursuing in respect of foreign affairs and national defence a policy upon which all parties in the State appear to be substantially in agreement. It is no longer possible—at least it would be very unfair—to say that one party is sound on national defence and the other unsound. If the alarming decay of our armed power is a matter for censure, Conservatives must share the blame with Liberals and Socialists: in other words, the nation as a whole, and not merely a faction, must be held responsible for the sins of omission which have reduced our defences to their present state of inadequacy.

It is fervently to be hoped that now that the next Naval Conference is drawing near public opinion will express itself more articulately and more positively than it has done on similar occasions in the past. In the sense that the reckless sacrifice of British interests was kept a close secret at the London Conference of 1930, secret diplomacy scored a great triumph. Such methods must never be tolerated again. If the British peoples voice their demand for adequate defence at sea, their representatives are not likely to repeat the grievous blunder they made in signing the London Treaty. But if the nation remains apathetic, it will again expose its statesmen to the temptation of achieving a Pyrrhic victory

Digitized by Google

of diplomacy by signing away our powers of self-defence.

Other nations are already preparing to enter the next Conference with a handful of trump cards. The large shipbuilding programmes for which the United States and Japan have legislated are frankly acknowledged to be for this purpose. "This time we shall come to the conference table with ships actually afloat, not merely in the blue-print stage," to quote an American spokesman. Japan has left us in no doubt as to what she will demand. France and Italy are less communicative, but a glance at their respective shipbuilding programmes reveals the advantageous position they will occupy as compared with that of 1930. For this country to place itself in a favourable strategical situation prompt and vigorous action is necessary. It is nearly, but not quite, too late.

Digitized by Google

CHAPTER XIII

NEW METHODS OF NAVAL LIMITATION

IT is commonly assumed that in default of some system of controlling naval armaments by international agreement the maritime Powers must needs engage in a go-as-you-please shipbuilding race with supremacy as the prize. This assumption is not entirely supported by history, but it contains enough truth to justify every reasonable effort to achieve some form of reciprocal limitation. As we have seen, the methods tried hitherto have not proved altogether satisfactory. Competitive building has continued in spite of existing treaties; in fact, the post-war era of treaty restriction has witnessed as keen a rivalry in the development of naval weapons as ever existed before the War.

The year 1934 found the United States and Japan openly competing for local command of the sea, and, nearer home, France and Italy were engaged in a similar race. So far Great Britain has escaped being drawn into direct competition with any one Power, though the steady growth of foreign navies is forcing her to make larger provision for her own naval defence and must ultimately compel her to redress the adverse balance by a really substantial

Digitized by Google

building programme. But for the confusion of thought in relation to national defence which the air menace has engendered, we should probably have had ere this one of those "naval panics" which occurred at regular intervals between 1870 and 1914 and always led to ill-considered and extravagant expenditure.

If for no other reason, the formidable cost of modern naval armaments furnishes a strong inducement to check their multiplication. With capital ships costing at least three times and cruisers about five times as much as their pre-War forerunners, and with every other item of naval equipment proportionately more expensive, the building and maintenance of the most modest fleet imposes a grievous burden on the exchequer. Naval limitation is therefore welcomed by every country as long as it can be effected without an undue sacrifice of security.

The first and most obvious step is to scale down the size, and therefore the cost, of fighting ships and the weapons they carry. If such a reduction were accepted by all nations it would leave the existing balance of relative strength undisturbed. Each Power would retain precisely the same measure of combatant strength as that which it now possesses, the only difference being the lower cost. So patent are the advantages of this policy that the delay in adopting it calls for explanation. Smaller ships and lighter armaments would probably have been adopted long ago but for American opposition.

Digitized by Google

There are various reasons why the United States continues to resist any revision of the battleship, cruiser, and gun-calibre standards established by the Washington Treaty of 1922. The first is the belief that by keeping the tonnage, and therefore the price, of individual ships at a high level the scale of naval power will automatically adjust itself to the international scale of wealth, at the top of which stands the United States. Further, the immense cost of the 35,000-ton battleships, 10,000-ton cruisers, big aircraft-carriers, and the powerful light craft sanctioned by existing treaties must tend to restrict their output and thus impose an effectual brake on naval competition. There is much to be said for this argument, though its merits are hardly likely to be appreciated by the less well-to-do Powers.

The second reason arises out of the traditional American policy of making each new warship as large and as formidable as possible. It has been for so long the practice of Congress to dole out naval funds with a niggardly hand, that the U.S. Navy Department for at least two generations has consistently specified the biggest and best ships when presenting a new programme. For example, if Congress were unwilling to approve more than two battleships or four cruisers, it was clearly to the interest of the Department to design these vessels on the largest scale. In similar circumstances the British Admiralty would doubtless have pursued the same course.

Digitized by Google

A habit once acquired is not easily broken, and now that Congress is in one of its rare moods of generosity towards the navy the Department is, naturally enough, still demanding the biggest ships and the heaviest guns.* Tactical and strategical considerations furnish an additional incentive. Apart from the accepted fact that, other things being equal, the largest ship can deliver and withstand the heaviest blows, great size is supposed to confer a wide radius of action, and in the absence of base facilities in waters where the United States Navy may one day have to fight, cruising endurance becomes a factor of cardinal importance. Finally the American case for maximum dimensions is clinched by the new, and purely American, conception of the battleship as a floating base thousands of miles from the nearest friendly territory.

Yet all these arguments, weighty though they be, have a purely national significance. Because it is to the interest of the United States to swell the size and cost of fighting ships, this policy must be maintained in the teeth of all opposition. Stated in this blunt fashion the American case for big ships does not appear in a very exalted light. As a protagonist of naval disarmament the United States will not find it easy to vindicate its championship of the heaviest and, by their nature, the most aggressive weapons of sea warfare. With the

* In March, 1934, Congress voted a naval programme which, if fully implemented, will involve an expenditure of £150,000,000.

Digitized by Google

possible exception of Japan, every other nation concerned in the movement to restrict naval armaments has subordinated the admirals to the statesmen when framing national policy. Only in the United States do the admirals appear to have the last word.

Two alternative battleship types have been suggested by the British Admiralty as substitutes for the Washington standard of 35,000 tons with 16-in. guns. The first is of 22,000 tons with 11-in. guns, but this, in the Admiralty's view, could not be accepted unless future cruisers were restricted to 7,000 tons and 6-in. guns. Failing such restriction, the Admiralty would like to standardise the battleship on a basis of 25,000 tons with 12-in. guns. There can be no doubt as to the ability of either type to perform with reasonable efficiency all the functions expected of a capital ship. The 22,000-ton ship would possess that crushing superiority over any 6-in. gun cruiser, however large, which is essential to the maintenance of a proper equilibrium of relative power. The 25,000-ton ship, armed with 12-in. guns, would be equally able to dispose of the biggest cruiser mounting 8-in. guns.

I shall deal in a later chapter with the case for abolishing the capital ship or, alternatively, so reducing it in size and power as to divest it of its present supremacy over all other types. But this is an appropriate place for an explanation as to why the British naval authorities, in common with those

Digitized by Google

of all other important maritime Powers, still put the battleship first and insist on its retention in the fleet of the future. The reasons were expounded with admirable lucidity by Sir Bolton Eyres-Monsell, First Lord of the Admiralty, in the House of Commons on March 12, 1934, and I cannot do better than quote what he said on the subject :—

> " The argument that the size of battleships should be reduced to 10,000 tons is advanced from three, quite distinct, points of view : by those who hope that the 10,000-ton battleship means economy ; by those who think that this size is sufficient from a strategical point of view ; and by those who think the 10,000-ton ship will make for peace, by reducing the power of aggression.
>
> " Before I deal with these three lines of argument, let me state what the Board of Admiralty consider the qualifications of a battleship to be. Battleships must be able to remain afloat against any form of attack from gunfire, torpedoes, mines, or aerial bombs, and technically it would be quite impossible to incorporate the protection necessary for this in a ship of 10,000 tons. But there is another and over-riding qualification necessary, and that is that our battleships must be overwhelmingly more powerful than the next type of vessel with which they may come in contact.

Digitized by Google

"Now let me deal with the economy argument. We have every sympathy with the wish for economy. We are anxious to reduce the size of our battleships, and have put forward our proposals for a large reduction in size; but I must remind the House that so far those proposals have not met with any great response.

"If capital ships were reduced to 10,000 tons, or even if the gap between the capital ship and the cruiser were unduly reduced, the fleets of all the smaller naval Powers, having no vessels more powerful than the cruiser class, would at once possess the power to upset the calculations of ratios and relative strength, either by combination amongst themselves or by reinforcement of the naval forces of a greater Power. It is only the possession of capital ships overwhelmingly more powerful than cruisers that enables us to accept so low a strength as is represented by a one-Power standard.

"When in time of war our interests were threatened in distant parts of the world, instead of being able to dispose of a concentration of enemy vessels by sending—as at the Falkland Islands—merely two ships of superior type, we might have to send, in order to achieve the same effect, double the number of ships of the same type as those concentrated against us. This would mean that we should be obliged to have so many 10,000-ton ships that the cost

Digitized by Google

of our Navy would be far more expensive than it is at present.

"Let us look at this problem from the strategical aspect. Suppose all nations were limited to 10,000-ton ships, and a country having parity or something less than parity in this type of ship wished to attack us. We must always have a large proportion of our ships spread all over the world, as our need for the protection of our trade routes is unique: therefore, at his selected time, an enemy could concentrate the whole of his force against only a fraction of ours, either in home waters or in any other part of the world; and if it were in home waters the whole of our converging trade, and indeed the whole country, would be at his mercy. This is making attack easy, aggression simple.

"But now suppose each country to have a small battle fleet in addition to their cruisers. An attack under these conditions, the conditions which obtain now, would become a far more difficult and hazardous undertaking. A great superiority of enemy cruisers could not have a decisive effect as long as our battle fleet was in being, and it would be necessary for the enemy to move his battle fleet, working perhaps at a great distance from its base, before our battle fleet would be challenged.

"Those people who are most enthusiastic for the 10,000-ton ship from a disarmament

Digitized by Google

point of view are the people who are most anxious to stop aggression in all its aspects. They think that if a country's defence can be strengthened and its offensive powers weakened greater security would be attained. I agree. The principal difficulty has been to define defensive and offensive weapons. The only definition which seems to meet with universal agreement is that which says that any particular weapon is offensive if you are standing in front of it and defensive if behind. But here, surely, it is plain that by reducing the capital ship to 10,000 tons, and thereby doing away with the present smashing superiority of the battleship over the cruiser, you would be deliberately playing into the hands of the aggressor and dangerously reducing the defensive power of the country attacked.

"Let me sum up by saying that neither technically, strategically, economically, politically, nor 'pacifically' could we accept a 10,000-ton capital ship, and this is probably the reason why all responsible investigators who have examined this proposition have reported against it."

No excuse need be offered for quoting at length from this authoritative statement in justification of the battleship. The arguments submitted by Sir Bolton Eyres-Monsell may or may not be unanswerable, but the fact remains that they have not been

Digitized by Google

answered. To elaborate but one point in his thesis: it would be impossible to design a 10,000-ton "battleship" capable of withstanding attack by modern naval weapons other than the gun. Even if, by some triumph of diplomacy, the naval gun were restricted to a maximum of 8 in., there would still remain the torpedo and the mine, to say nothing of the aircraft bomb.

The latest torpedoes are so destructive that one hit, or at most two, would infallibly send to the bottom any ship of 10,000 tons which conformed to the lowest acceptable standard of speed and armament. This for the reason that such dimensions would not permit of that extensive subdivision of the hull which alone can localise the effect of a violent under-water explosion and thus prevent the flooding of spaces sufficient to cause loss of buoyancy. And the same is true of the latest pattern of mine. Even from the purely technical aspect the 10,000-ton "battleship" would become practicable only if all the Powers agreed to limit naval gun calibre to 8 in., and torpedoes and mines to half or one-third their present size. Whether such an agreement lies within the sphere of practical politics is a question which appears to admit of but one answer.

It is universally agreed that some limit on the size of individual warships is an essential condition of any feasible scheme of naval limitation. So much was realised at the first naval conference held at Washington in 1921–22, when battleship and cruiser

Digitized by Google

standards were fixed at 35,000 and 10,000 tons respectively. Without such limits there would be nothing to prevent a treaty Power from investing part of its total tonnage quota in a few ships of extraordinary size and armament, which would upset the balance of relative strength. We may take it, therefore, that the existing standards must remain, though it is to be hoped that they will be drastically reduced.

But with that important qualification a strong case can be presented for reversing the existing system of limitation by ship categories and restricting the various navies to a common or graduated scale of total or "global" tonnage. It is surely illogical to attempt to fix the requirements of any particular fleet at so much capital ship, cruiser, destroyer, and submarine tonnage, as has been done in the past. Once maxima have been established for individual types, each signatory Power should be left to dispose of its tonnage quota in accordance with its own defensive requirements or strategical views.

Better still, why not lay down a maximum tonnage allowance common to all? This would have the supreme advantage of placing all the Powers concerned on the same level, in principle. It would put an end to the invidious distinctions which affront national pride and have notoriously rendered the conclusion of disarmament agreements more difficult.

Great Britain and the United States favour

Digitized by Google

limitation by ship categories; France, and apparently Japan as well, prefer the global system, though they have temporarily accepted the Anglo-American formula. Italy remains firm in her attachment to the global method. Few of the arguments advanced against that method will bear analysis. It is asserted, for example, that the fixing of a tonnage aggregate would leave any Power free to invest the greater part of it in submarines, thereby compelling the others to expend a disproportionate amount of their tonnage on anti-submarine craft. That argument, first put forward at Washington in 1921, has been rebutted by actual experience.

Neither at Washington nor subsequent conferences would France agree to any restriction of her submarine strength within a limit acceptable to Great Britain and the United States. She therefore retained complete liberty of action in this respect. What has been the result? It is true that since 1922 she has built or is building over eighty submarines, but within the same period she has laid down two battle cruisers, nineteen cruisers, and fifty-eight heavy flotilla leaders and destroyers, the tonnage of which greatly exceeds that of her submarines. In other words, France prefers a well-balanced fleet to a lop-sided armada composed mainly of one special type of vessel, and what is true of France is true of every other Power of naval importance and experience.

Italian policy since 1922 is a further case in point.

Digitized by Google

Together with France she has been free from all restriction in regard to non-capital tonnage, and, like France, she has great confidence in the fighting power of submarines. Of these she has built or is building fifty-four, but she has also produced, or is about to produce, two great battleships, nineteen cruisers, and forty-five flotilla leaders and destroyers whose tonnage is far in excess of that of the submarines. Clearly, therefore, the contention that restriction by global tonnage would tempt one Power or another to build an inordinate number of submarines cannot be sustained.

Once the global principle is accepted it is easy to state a case for establishing a maximum of tonnage common to all. Politically the effects could not be other than beneficial. As matters now stand Great Britain and the United States claim naval predominance. Japan has agreed for the time being to rank as third in command of the seas, while in principle France and Italy share fourth place. The artificial character of this arrangement is self-evident. It is based on considerations of economic and political expediency which are not likely to endure, and meanwhile it is definitely doing harm to international relations.

In the last resort the strength of any navy is determined by the factor of economy. Such exceptions as might be cited merely prove the rule. At first sight the outstanding exception was provided by Japan in 1921. She was then spending more than half of her entire revenue on naval

Digitized by Google

armaments. But the pace was too hot to last. As students of Far Eastern affairs are aware, the domestic disorders from which Japan was suffering in those days were mainly the result of the onerous taxation necessitated by the colossal military budgets. The nation was on the verge of financial revolt, and for Japan, at least, the Washington Conference for the restriction of navies came in the nick of time. Equally notorious is the fact that both Great Britain and the United States were eager to rid themselves of the financial burden imposed by their huge battleship programmes of that date. In short, money talked with its customary eloquence, and in the end its voice was decisive.

A further modifying influence on the development of naval armaments is provided by the strategical problems peculiar to each nation. It is impossible to conceive of France devoting more care to her navy than to her army, and by no stretch of the imagination can we visualise Great Britain subordinating the claims of the navy to those of her land forces. Geography will always dictate strategy. As long as Great Britain remains independent and solvent, security from overseas attack, whether by ships or aircraft or by both, will continue to be her main preoccupation in the sphere of defence. Conversely, to every Power which has extensive and vulnerable land frontiers at home the strength of its army must be the first consideration. These may be platitudes, but taken together they constitute a decisive answer to the principal argu-

Digitized by Google

ment against limiting naval armaments by the global tonnage formula.

The suggestion made above is not only that this system should supersede the present one of allotting tonnage quotas for each type of vessel, but that a single tonnage aggregate be established for each and all of the Powers taking part in a future conference. This proposal is not quite so revolutionary as it sounds. True, it means that Japan, France, and Italy would each be conceded the right to build a navy equal to that of Great Britain or the United States, but the natural restraints I have already detailed in connection with the global system would be equally operative in this case.

The contingency that one or other of the countries mentioned would actually build to the full tonnage limit is so remote as to be negligible. As far as present conditions foreshadow those of the future, no third Power except Germany is likely to be in a position to compete on approximately equal terms with Great Britain or the United States. And as regards Germany, her eventual status in the community of naval Powers must be governed in large measure by the over-riding claims of her land forces.

The common aggregate of tonnage would, of course, have to be sufficiently large to provide for the needs of the leading Powers, and prolonged negotiation would be necessary to determine the figure. It might be based approximately on the highest quotas now in force: those specified by the Washington and London

Digitized by Google

treaties. By these agreements the British Navy is restricted to 525,000 tons of capital ships, 135,000 tons of aircraft-carriers, and 541,700 tons of cruisers, destroyers, and submarines, a grand total of 1,201,700 tons, exclusive of special types not subject to control, and auxiliary craft.

Assuming this to be the lowest figure consistent with British needs—and it is a very modest total indeed in view of the fact that a considerable percentage must be devoted to capital ships and cruisers of the extravagant size permitted by existing treaties—it might conveniently become the international maximum.

Naval limitation on this system would dispose of most of the objections raised against the present method of tonnage ratios with its invidious distinctions. Japan would no longer chafe under her implied relegation to secondary rank among the great Powers. French *amour propre* which has suffered grievously since France was compelled, under moral suasion, to accept only a modicum of the heavy tonnage assigned to Britain, the United States and Japan, would be soothed, and she might well become a willing instead of a reluctant coadjutator in the cause of naval disarmament. Italy, which has always pressed for limitation by global tonnage, would certainly welcome the new arrangement. It would have the further advantage of opening the door to any other Power, including Russia, that wished to enter the naval consortium but was not prepared to accept the fixed and

Digitized by Google

necessarily small quota of tonnage which it would receive under the existing system.

For reasons already explained, the continuance of maximum standards of size for every type of combatant vessel is an essential condition of the scheme here outlined. Unless all the Powers taking part bind themselves not to build a capital ship, a cruiser, or a submarine above a certain tonnage, the plan becomes impracticable. Nor should any effort be spared to effect a sharp reduction in the standards now prevailing. With capital ships restricted to 25,000 or 22,000 tons, cruisers to 7,000, and submarines to the smallest dimensions compatible with seaworthiness, the international tonnage maximum might even be brought down to a round million without any sacrifice of national security.

It is hardly necessary to emphasise the importance of exploring in advance every channel that promises to lead to the goal of armament limitation. All the methods tried hitherto have failed, or appear to be on the verge of failure. Unless present indications are grossly misleading, neither the Washington nor the London naval pact stands much chance of surviving the next conference. Japan has already given notice of her decision to claim equality with the strongest, and her action probably foreshadows the end of the ratio system. France maintains a detached attitude, but shrewd observers anticipate her flat refusal to attend any future conference which seeks to perpetuate existing formulas of limitation.

Digitized by Google

Italy, too, is opposed to them. If British and American statesmen shut their eyes to the danger signals now in full view they are likely to have a rude awakening.

The conviction of many, if not the majority, of those who have studied the brief history of naval disarmament by agreement is that the ratio method is discredited and doomed. There is nothing to take its place but the global system, which in theory may be objectionable but which in practice is, to all appearance, the only way. The alternative is a reversion to the pre-War situation, when each Power built such warships as it wanted and asked nobody's leave.

Strange as it may seem, that period of complete freedom, lasting a hundred years, witnessed only one war which could be ascribed directly or indirectly to competition in naval armaments. The political realist might urge this fact as a good excuse for the world to wash its hands of the whole business of attempting to control armaments by international accord. But we are servants of the age in which we live, and for good or ill armament limitation is now the orthodox panacea against the scourge of war. Hence the restless search for new formulas to replace those which the world has rejected, or is about to reject. It is accordingly with due diffidence and with no claim to originality that the foregoing scheme of naval limitation is submitted.

Digitized by Google

CHAPTER XIV

IN DEFENCE OF THE BATTLESHIP

WHAT is the status of the battleship, or capital ship, under existing conditions, and what is it likely to be ten or twenty years hence, assuming a normal rate of progress in the science of naval warfare? Is this type of ship already obsolete, or is there good reason to suppose that it will become obsolete in the near future? These are questions of more than academic interest. As long as they remain unanswered it will be difficult for any one of the great maritime Powers to map out a definite and systematic policy of sea defence.

After December 31, 1936, unless the battleship "holiday" proclaimed in 1922 is prolonged, every Power will be free to resume the construction of capital ships. It is not enough that the executive heads of the British, United States, Japanese, French, and Italian navies are satisfied that the capital ship is, and will remain, the strongest exponent of armed force at sea. Public opinion is a factor of weight in the moulding of defence policies, particularly in the case of Great Britain and the United States, and if the public in either country made up its mind—or had its mind made up for it by skilful propaganda—that the capital

Digitized by Google

ship was obsolete, funds for its perpetuation would be withheld, let the experts plead as they might.

Already there has been implanted in the public mind a prejudice against this type of warship. It would be difficult to over-estimate the effect on lay opinion of the anti-battleship crusade which Admiral Sir Percy Scott carried on almost to the day of his death. Several of the most widely-read newspapers in Great Britain subsequently assumed an attitude of hostility to the battleship, and in Parliamentary debates on naval affairs the opposition to further expenditure on this class of ship made itself felt.

Two or three years hence the Admiralty may have to ask Parliament for credits to lay down new battleships, and there is practically certain to be strong opposition from those legislators who quite honestly believe the battleship to be useless. Air enthusiasts, to say nothing of submarine champions, have proclaimed the demise of all surface fighting ships so often and so loudly that a pure hypothesis is coming to be invested with the dignity of an established truth.

What, then, is likely to be the position in 1937, at which date the battleship holiday threatens to lapse? Proposals to lay down replacements for the aged craft which will then compose the battle fleet are certain to meet with resistance in many quarters, and it would be hopeless for the naval authorities to try, at the eleventh hour, to demonstrate the actual need of new ships. It may be

Digitized by Google

true that the simultaneous disappearance of all such vessels from the world's navies would have no immediately visible effect on relative strength —provided existing treaty ratios in respect of other craft were adhered to, which is certainly not the case at present.

If, on the other hand, the capital ship were discarded by some nations and retained by others, the balance of power would be rendered vague and uncertain, to say the least of it. From every point of view, therefore, it seems expedient to define, as clearly as may be, the present and future rôle of the battleship in strategy and tactics.

This I propose to attempt by an objective survey of the data available, with special reference to questions of design, construction, offensive and defensive attributes, as well as the technique of weapons which, as certain critics claim, could be employed against the battleship with deadliest effect. Hitherto this aspect of the problem has been largely neglected in public discussion. The average newspaper reader has no relish for technicalities, and since it is the business of editors to keep their readers interested they cannot be blamed for giving more prominence to picturesque indictments of the battleships than to sober and reasoned arguments for the defence.

Nevertheless, fundamentally the problem is a technical one, and cannot rationally be approached from any other angle. It is so easy to say, and is so often said, that " aircraft can sink the mightiest

Digitized by Google

battleship afloat." There is, no doubt, a substratum of truth in the statement, but as a general proposition it is entirely misleading. Of broader but equally deceptive application is the further claim that aircraft and submarines together will drive every surface ship from the face of the waters. This is mere prophecy, not only unsupported by a jot of tangible evidence, but running counter to actual experience. To abandon tried principles in favour of untested theories is always unwise: to do so in such a vital matter as national defence would be madness.

The modern battleship incorporates the ultimate degree of naval artillery power. It is at the same time the least vulnerable of all ships in this form of attack. It is expressly designed to deliver and to withstand harder blows than any other type of vessel. Among surface craft it is admittedly supreme. Yet its critics assure us that the battleship is a slothful, clumsy, and feeble giant, an emasculated Goliath, impressive only because of its bulk and entirely at the mercy of the punier but more agile opponents who would swarm about the inert monster and sting it to death. Let us examine this theory in the light of known facts.

The modern capital ship, so far from being slothful, can move through the water as swiftly as an Atlantic liner. There are capital ships which can steam at 31 knots—35·7 land miles an hour—and are therefore appreciably faster than the swiftest liners now afloat. The slowest capital

Digitized by Google

ships in the British Navy have a designed speed of 23 knots. The capital ship is able to maintain its high speed of progression for long periods, thanks to the introduction of oil-fuel; at lower speeds it can cruise for 10,000 miles or more without re-bunkering.

Propelled by internal-combustion engines, the battleship of the future may well have a cruising endurance of 25,000 miles. In the hands of a capable navigator the modern battleship is handled as easily and just as surely as a great liner. To label such a vessel slow and clumsy is an abuse of words. Its principal arm of offence is the big gun, of which it may carry eight to twelve pieces, according to calibre.

So much has been heard about the terrible havoc wrought by torpedoes and air bombs that the destructive power of heavy naval ordnance is liable to be under-estimated. Accepting H.M.S. *Nelson* as a typical battleship of fairly modern design, we find her mounting nine 16-in. 45-calibre guns. Each weighs 103 tons, and discharges a projectile of 2,460 lb. with an initial velocity of 2,953 ft. per second. The energy developed at each discharge would lift a weight of 100,000 tons one foot above the ground. If a gun of this type were on view at a public exhibition its tremendous size and power would amaze all beholders. Mounted in a turret on shipboard it seems to be dwarfed by the size of the vessel itself, and the prodigious destructive energy latent within this massive tube of steel is less evident to the casual eye.

Digitized by Google

Notwithstanding the great weight of gun and projectile, one round can be fired every forty-five seconds, and this rate of fire can be kept up as long as the target continues to bear. Thus the *Nelson*, going into action with her nine 16-in. guns loaded, could deliver forty-five rounds in the first three minutes; and since over nine tons of shell is projected at each broadside, her volume of discharge in that brief space of time would not be far short of fifty tons.

This torrent of fire could be directed against any target up to 18 miles. At shorter ranges a high percentage of hits might be expected. As the 16-in. shell has great penetrative power—at 9,000 yards it will pass through 18 inches of the hardest armour-plate—none save the most heavily armoured ship could resist its thunderbolt impact, and each shell that drives into the vitals of the target will detonate there with the force of a large-calibre bomb. With these facts in mind, it is not difficult to visualise the extraordinary sum of destructive power that a squadron of present-day battleships could exert. Nothing has been said of the secondary armament of twelve 6-in. guns, each pouring forth 100-lb. shell at the rate of eight to ten per minute, or of the anti-aircraft guns which fire still more rapidly.

So much, then, for the battleship's offensive powers. Her combination of high mobility and long-range, hard-hitting artillery makes her a tactical unit of unique value under the ordinary conditions of squadron warfare. Her sole *raison*

Digitized by Google

d'être is to serve as a floating auto-motive platform for the heaviest ordnance. The big gun, despite all assertions to the contrary, is at once the most accurate and least resistible weapon of naval combat. The torpedo is a formidable arm, but in range and precision it is far inferior to the gun, while the damage it causes may be localised by devices to which reference will be made in due course.

Air bombs of very large calibre may inflict mortal injury on the average battleship, provided enough of them can be dropped in exactly the right place. A few direct hits from such bombs might wreck the upper works and damage controls, but whether they would disable the ship as a fighting unit has yet to be proved. Heavy bombs detonating alongside would produce much the same effect as torpedoes, the damage from which may be kept within bounds. It is, however, important to note that these very heavy bombs cannot be transported by aeroplanes operating from the deck of a ship; they can only be used by large machines flying from a shore base. Bombs of the maximum calibre that ship aeroplanes are able to carry would not be likely to inflict more than superficial injury on a battleship of modern design.

Nor must it be overlooked that the menace of air attack is still of too recent an origin for ship designers to have explored all the possibilities of defeating it. The problem, however, is closely related to that of protection against high-trajectory

Digitized by Google

or plunging fire. A ship well-defended against shell falling at a steep angle would have little to fear from bombs.

It is often claimed that gas bombs would speedily disable the largest battleship by putting the entire crew out of action. In point of fact the gas peril, for what it is worth, has long been recognised, and measures have been taken to avert or minimise it. Certain of these measures, and perhaps the most effective of them, are confidential; but it may be said that every officer and man on board a battleship going into action would be equipped with a gas mask, so designed as not seriously to interfere with the performance of his duty, whether it be the reading of a range-finder, working an instrument in the plotting-room, or controlling an oil-jet under a boiler.

Realistic tests have been made to determine whether the fighting efficiency of a ship would be impaired under such conditions, and the results justify a negative answer. Further, it is technically possible to construct gun-turrets, plotting-rooms, and other enclosed spaces vital to the working of the ship which would be virtually gas-proof. This improvement has already been introduced into many capital ships, and it will certainly be a feature of all those built in the future. Phosphorus, incendiary, asphyxiating, or explosive bombs—all can be countered by the naval architect if he is allowed a reasonably free hand.

Nor is he dismayed by the menace of torpedo or

Digitized by Google

mine, neither of which presents an insoluble problem. Before the Great War the power of such weapons was under-rated, and consequently the protection of ships from under-water attack did not receive—in the British Navy at least—the attention it merited. It was, therefore, not surprising that battleships of the older class should often have succumbed to the powerful torpedoes and mines which were employed during the War. Even H.M.S. *Audacious*, a dreadnought completed just before the War, foundered after striking two mines.

But to cite such incidents as proof that the modern battleship is too vulnerable to be worth perpetuating is to ignore the remarkable progress since made in design and construction. No sooner did the full extent of the under-water peril become evident than naval architects set themselves to grapple with the problem. An early result of their labours was the bulge, a device that proved successful beyond anticipation. Many bulged ships were torpedoed during the War, but none was sunk.

Perhaps the most striking example of endurance to punishment was afforded when the monitor *Terror*, of 7,200 tons, was attacked by German destroyers off the Belgian coast. Although hit by three torpedoes in succession, she remained afloat and was able to proceed into port under her own steam. In a few weeks the damage was repaired and the ship back at her post. A sister-ship, the *Erebus*, was struck by a distance-controlled motor boat, carrying a charge of 500 lb. of T.N.T.,

Digitized by Google

which detonated amidships. In this case the bulge so effectively absorbed the shock that the hull proper sustained no injury whatever, not even a leak being started.

As the explosion may be said to have resembled that of a large-calibre bomb falling alongside, it is a fair inference that bulged ships, or those which have the multiple system of sub-division which has superseded the original bulge, are not likely to be disabled by under-water explosions from any source.

In capital ships of the post-War era there are so many longitudinal bulkheads between the vital spaces of the ship and the outer skin plating that no exterior explosion would be likely to inflict crippling injury. It is true that torpedoes and mines of greater power than those in use in 1914–18 have been evolved. So far, however, as the torpedo is concerned, a limit is fixed to its size by considerations of space and weight in the vessel carrying it. Experience has shown the 21-in. torpedo to be the heaviest that can be handled conveniently in destroyers and submarines of normal dimensions. Larger torpedoes have come into service, but they will probably continue to be the exception, not the rule.

To minimise the effect of mine explosions is a more difficult problem. Bulges offer no defence to a mine detonating beneath the keel, but even here the ingenuity of the designer is not baulked. Experiments have shown that triple bottoms offer a

Digitized by Google

substantial degree of protection. Moreover, the mine itself has lost much of its terror since the introduction of the paravane. A ship armed with this gear can steam through a mine-infested area at small risk to herself.

From this brief review of developments in construction it will be seen that the menace of underwater attack is relatively less serious than it was twenty years ago, for while the methods of such attack have undergone little improvement in the interval, the defence has steadily progressed in efficiency. It may, therefore, be affirmed as a fact beyond reasonable dispute that the primacy of the capital ship has not been seriously impeached by the submarine.

There remains the threat from the air. The possibly fatal effect of super-calibre bombs on the strongest battleship is discussed above. Bombs of 1,000 lb. and upward do most certainly constitute a real danger to any vessel. Bombs of less weight than this, judging from such trials as have been held, might cause serious structural damage and heavy loss among the exposed personnel, but probably would not put the ship out of action.

Now, it seems clear that a battleship could not be disabled, let alone destroyed, by bombing 'planes capable of being flown off ships, since the useful military load of such machines is definitely restricted. This being so, the battleship would incur serious danger from air attack only if and when it approached within range of an enemy's shore aero-

Digitized by Google

dromes. That range will naturally lengthen with the progress of aviation.

Machines are now in service with a flight endurance exceeding 1,000 miles and a useful load of 2,000 lb. For the present, therefore, we may take 500 miles as being the greatest distance from land at which a heavy bombing raid could be launched against warships. In practice the distance would be considerably less, for the objective—unless it happened to be a ship or ships moored in a known anchorage—would first have to be located, and a ship under way might shift her position by as much as seventy miles during the time it took the attacking 'planes to come out from their base.

Even assuming the objective to be duly found and the assault delivered, what are the prospects of success? A fleet that knew itself to be within range of shoreward air raids would certainly have its own 'planes ready for counter-action. The raiders would thus have to reckon upon meeting opposition before they got within striking range. Another disturbing element would be shell-fire from below, and while it is customary for aircraft partisans to scoff at this form of defence, a well-directed cannonade from the numerous high-angle guns of a battleship division would not facilitate accuracy of aim on the part of the bombers.

Moreover, if the targets were found at sea they would be travelling at speed on an erratic course, perhaps emitting vast clouds of smoke. Peace-time tests afford no reliable indication as to the

Digitized by Google

percentage of hits likely to be registered under such conditions. Bomb-sights, and the human brains adjusting them, might not work so perfectly as they are wont to do in peace practice, and each 'plane, once its heavy bomb or bombs had left the trap, could take no further part in the attack. Is it seriously contended that by tactics such as these the ocean is to be swept clear of battleships?

Those who decry the battleship should pause to reflect that its magazines contain from 700 to 850 projectiles equal in destructive power to the heaviest demolition bombs, and that these deadly missiles can be hurled, not at random but with great precision, up to a distance of many miles. So far as all the evidence goes, a battleship runs an infinitely graver risk of destruction when engaged with an adversary of its own type than if it were being subjected to air attack. The ex-German battleship *Ostfriesland*, expended as a target, was not sent to the bottom until she had been exposed to many hours of bombardment from the air, although the ship was motionless and defenceless. At the Battle of Jutland three great capital ships moving at high speed were sunk in swift succession by the fire of guns no heavier than 12-in. calibre, two or three salvos at most being sufficient in each case to administer the death-blow.

The most zealous champion of aircraft must perforce concede the enormous destructive power of the gun, nor can he logically deny that this weapon, by reason of its superior precision, would hold its

Digitized by Google

own against all other arms, provided the ship in which it is carried could be made virtually unsinkable. In effect, therefore, the present controversy on future naval tactics centres in the possibility or otherwise of keeping the battleship afloat, and this in turn is purely a technical question. A ship armed with heavy long-range guns, and able to defy attack from below or above, must dominate the seas.

The claim here presented is twofold: first, that the latest modern battleships, such as the British *Hood* and *Nelson*, the U.S. *Maryland*, the Japanese *Nagato*, and the French "Dunkerque" type, are so constructed that they would be difficult to sink, or even to disable, by torpedoes or air bombs; that future battleships could be endowed with a much higher degree of protection by accepting some reduction in speed and weight of armament. Before proceeding to examine the strategical and tactical functions of the battleship, it may be of interest to consider possible lines of structural development.

These will be governed in the main by the progress of submarine and aerial warfare. Heavier torpedoes and air bombs will compel an increase in the resisting power of the battleship. As we have seen, the danger of plunging fire from heavy guns is already causing designers to pay more attention to horizontal armouring, which would be equally effective against bombs. H.M.S. *Nelson* has a 6½-in. deck over her vitals, besides a 14-in.

Digitized by Google

belt on the water-line. The battleship of the future may have only light belt armour, or none at all, the whole weight of protective plating being put into a steel turtle deck enclosing all the vital spaces, such as machinery and magazine compartments.

Warship design is essentially a problem of compromising weights. High speed demands a generous margin of weight for machinery and increased length of ship, while if a powerful armament is also specified the surplus left over for armour must needs be limited. Conversely, if a moderate speed is accepted the ratios of weight available for guns and armour are higher. If moderate speed is combined with a reduction in armament the percentage of weight which can be devoted to protection will be very large and the ship proportionately invulnerable. In modern battleships this percentage varies between 30 and 35 per cent., but by compromising on speed and armament the protection could be greatly improved. Unquestionably some sacrifice of speed and gun-power is worth making to render the battleship of the future as nearly unsinkable as possible.

A word must be said about the influence of the internal-combustion engine on battleship development. Anything which tends to enlarge the cruising radius of a warship obviously tends to increase its strategical value. The present type of battleship, driven by steam, has a sea endurance of, say, 10,000 miles. In time of war the actual distance it could traverse without re-bunkering would,

Digitized by Google

however, he considerably less than this, owing to the need for fast steaming and zigzagging in areas where hostile submarines were suspected to be lurking.

As a result, the steam battleship under war conditions would hardly dare to venture further than 1,500 or 2,000 miles from its base. The same disability is, of course, common to all naval steamships, among which, however, the battleship has the largest endurance. Still, even the latter cannot wage war at any great distance from its base unless adequate fuel supplies are obtainable locally—that is, from an emergency base within the war zone.

But if the cruising endurance of the battleship could be so extended as to make it independent of base facilities for weeks at a time, its efficiency as an instrument of warfare would be immeasurably increased. The substitution of oil-engines for steam may render this possible. In this connection the most important development of recent years is represented by the German "pocket battleship" *Deutschland*. Displacing 10,000 tons only, this vessel has Diesel engines developing 56,800 h.p., the speed being 26 knots. Her radius *at 20 knots* is given as 10,000 miles. No other vessel yet built has such a cruising endurance at this relatively high speed. With her engines working at low power the *Deutschland* is credited with a radius of 18,000 miles.

As improvements render the Diesel engine still more economical in fuel consumption the cruising

Digitized by Google

range of ships so propelled will steadily lengthen until, eventually, we shall in all likelihood have warships which can keep the seas as long as the old sailing three-deckers and frigates were able to do. When that happens the science of naval strategy will be released from the fetters now imposed upon it by the restricted radius of steam-driven men-of-war.

Before leaving the technical aspect of the battleship problem it is desirable once more to emphasise the fact that nothing approaching finality has yet been achieved in the design and construction of such vessels. Even keeping well within the limits of tonnage imposed by treaty, marked improvement could be effected in protection and armament. If it can be shown that command of the sea depends in the last analysis on sheer fighting power, and, further, that the last word in naval combat rests with the big gun, then it would appear to be sound policy to accept some sacrifice of speed for the sake of increased gun-power and protection. For all-round utility a battleship of 20 knots speed might be preferable to a faster but more vulnerable ship.

Tactical exigencies may yet promote the building of heavily-armed battleships, virtually proof against torpedo and bomb, with moderate speed and a cruising endurance sufficient to take them round the globe. The advent of such craft would inevitably modify existing ideas of naval strategy, which are bound up so closely with problems of logistics.

Digitized by Google

We come now to the concrete issue: Is the battleship indispensable to the security of a great maritime Power with a vast ocean trade and far-flung, widely-scattered possessions? Since those who maintain the negative view generally turn a deaf ear to arguments resting upon past experience, holding that aircraft and submarines have revolutionised the conditions of sea warfare, it becomes necessary to rest the case for the battleship upon presumptive premises. In so doing, however, we but follow the example set by air enthusiasts, whose contentions are based entirely upon hypotheses.

The strategical necessity of having a battle fleet available as the backbone of any effective system of commerce protection has been explained in the previous chapter. Let us, however, consider what part the battleship would play if Australia were menaced with invasion by an Asiatic Power. If the British and Imperial naval forces in the Pacific did not include a battleship squadron they could offer no serious resistance to the invader, who would almost certainly have a strong battleship escort. If, on the other hand, both sides possessed battleships, it is extremely unlikely that the actual invasion would be launched until a decisive action had been fought for local command of the sea.

From time to time Imperial Conferences are held at which pious resolutions are passed urging the desirability of closer co-operation between member-States of the Empire in matters of defence. Naval men know, however, that the first condition of

Digitized by Google

security for Australasia and our Far Eastern possessions is the presence of a battle fleet in the Pacific. But for the financial problem this fleet would have been called into existence long since. It was, in fact, definitely projected after the Great War, when the Singapore scheme was adopted. Six to eight battleships of the most powerful type, based preferably in Australian waters, would represent the strongest conceivable guarantee against a breach of the peace in that part of the globe.

Except, perhaps, in numbers so great as to be chimerical, aircraft could neither facilitate nor seriously impede an invasion of Australia. It is an age-old maxim that no military descent can be made on an enemy's coast until his naval forces have been defeated, demoralised, or contained. When the objective lies at a considerable distance across the sea, this axiom applies to aerial invasion no less than to an actual landing of troops, because in each case the invading force, whether consisting of troops or aircraft, has to be conveyed in ships. It is thus abundantly clear that no British Dominion could be subjected either to military or air attack on a major scale except by an adversary who had gained command of the sea through defeating the local British naval forces or penning them inside their bases.

Having endeavoured to prove the efficacy of battleships as a form of insurance against military or air invasion, let us now consider another claim made by aircraft partisans, namely, that their

Digitized by Google

favourite arm is sufficient in itself to thwart any form of naval aggression without the aid of sea power. One's thoughts turn instantly to blockade, as being by far the most probable form that naval operations by one Power against another would take.

We need have no hesitation in acknowledging that close blockade has been rendered more difficult by the appearance of aircraft, though, indeed, the idea of close blockade had been given up by naval strategists long before the first reliable aeroplane flew. The development of torpedo warfare had made it too hazardous to be worth while. We have thus to consider only the distant blockade, which, as Germany discovered to her cost, may prove just as irksome and, in the end, just as deadly as the older system of short-range blockade.

Now, there is no known means of raising a sea blockade other than by defeating, or at least holding in check, the main naval forces of the blockader. It would be instructive to learn how this could be done by aircraft alone. Were any great Power to scrap its battleships it would be discarding its surest shield against the menace of blockade. That operation is effected by maintaining a cruiser patrol across the main shipping routes that converge upon a given stretch of coast. All through the Great War British cruisers patrolled a line extending from the Shetland Islands to the coast of Norway and thus covered every northern approach to Germany.

Digitized by Google

The " cruisers " employed on this service were, in fact, armed liners, which any big warship could have blown to matchwood. Yet, apart from submarine raids, they were never molested. The reason for their immunity was simple: behind them lay the battleships of the Grand Fleet, ready to rush to their support at short notice. Germany, therefore, could not raise the blockade which was throttling her without first defeating the British battleships, and since her navy did not feel disposed to attempt this she had to endure the rigours of the blockade as best she might.

If Great Britain or a British Dominion were ever subjected to blockade through culpable neglect of sea power, the geo-strategical conditions would be different, but the principles would remain the same. Ships approaching the coast would be held up by hostile cruisers, which would probably be careful to keep beyond range of air attack from the land. Blockading cruisers might occasionally fall victims to submarine attack, but when the area of patrol is extensive this danger is not intolerable—*vide* the experience of the 10th Cruiser Squadron in the North Sea for more than four years—and it can be mitigated by vigilance and skilful seamanship.

The Germans, with all their submarines, never succeeded in driving away for a day the feeble British cruisers that maintained the Northern patrol. If the future British Navy comprised cruisers, destroyers, submarines, and aircraft, but no battleships, what could it do against a blockading

Digitized by Google

force? If light craft were sent against the enemy cruisers these would promptly call up their battleships, the heavy guns of which would speedily decide the issue. Aircraft would be powerless to prevent a long-range blockade. To this end counter naval action is essential, but such action could not be made effective without the support of the dominant factor in combat on the high seas—that is, the battleship.

The battleship is not designed as a commerce raider, but there is every reason to anticipate that it would be a formidable menace if employed as such. Cruisers dare not face it. Submarines are too slow and purblind to deal with a ship footloose in the broad ocean; their opportunities for attacking it would depend largely on luck, a factor upon which the wise strategist never builds. Shore aircraft could do nothing unless the raider came within their limited reach, which he would be careful not to do. Aircraft flying off ships could not cripple him with the relatively light bombs they carry. Torpedo-planes might be more dangerous, but the drawback to these machines is that they have to descend close to the surface of the sea before releasing their torpedoes, and in so doing they offer an excellent target to flat-trajectory barrage fire from quick-firing guns.

A raiding battleship could "mop up" any and every convoy which was escorted by cruisers only. The only sure method of protecting convoys would be to provide them with battleship escort. The

Digitized by Google

possibility that Germany might send battle cruisers into the Atlantic was a nightmare to the Allies throughout the Great War. Elaborate measures were taken to meet this contingency, including the stationing of a battleship squadron off the Irish coast.

Assuming the same danger to threaten us in a future war, can air enthusiasts honestly maintain that they would be prepared to counter it with aircraft alone? How, for example, would they deal with a hostile battleship raiding the Atlantic routes? The quarry could not be reached by aircraft flying from the land. It would have to be sought by 'planes carried in ships, and the military limitations of such machines are notorious. Moreover, the aircraft-carriers themselves would be liable to be sunk out of hand by the raider's big guns.

In war it is the heaviest punch that counts. We know the submarine can deliver a knock-out blow when opportunity offers and the target is vulnerable. We know the aircraft, whether bomber or torpedoist, may—in circumstances so exceptionally favourable as to be almost inconceivable—cripple a dreadnought. But we know also that the most accurate, the least resistible, and the deadliest of all blows that can be struck in naval warfare is a salvo from the heavy guns of a battleship.

In conclusion, the case for the battleship may be rested with confidence on the following points:—

1. The big gun is in all respects the most decisive

Digitized by Google

weapon of sea warfare; hence, the ship armed with big guns must necessarily remain the capital unit of sea power, provided it can be made reasonably proof against under-water and overhead attack.

2. No battleship now afloat typifies the last word in protection. But battleship design is not standardised. There would be no technical difficulty in building a ship virtually unsinkable by any form of assault save gunfire. This would involve some sacrifice of speed; but even so the battleship would still be twice as fast as the swiftest submarine travelling below water, and the low speed of the submarine is not held to nullify its fighting value. Furthermore, the development of internal-combustion engines will probably so increase the radius of the future battleship as to render it independent of the land for weeks at a time.

3. The tactical value of submarines and aircraft in oceanic warfare, as distinct from coastal operations, is largely speculative; that of the battleship is self-evident. It can cruise and fight in weather that would incapacitate submarines and aircraft. It can infallibly defeat every other type of surface vessel. With proper destroyer support it has little to dread from submarines, and with an aircraft-carrier in company the menace of air attack is not too serious. In any case, the risk of submarine and air attack would be cheerfully accepted by the commander of a well-balanced battle fleet in return for the overwhelming weight of offensive power which lay in his hands.

Digitized by Google

4. The battleship has been justly defined as "the *ultima ratio* of naval force, that element of naval force which in the last resort crowns and sustains all the rest." Is that definition applicable either to the submarine or the aeroplane? All the evidence is against it.

5. When the torpedo has acquired the range and precision of a heavy naval gun; when submarines have become as swift, as seaworthy, and as habitable as big surface vessels; when the range and carrying power of aircraft have increased tenfold, and bomb-dropping is as accurate as gun practice; then, and not till then, will the primacy of the battleship be seriously impeached.

Digitized by Google

CHAPTER XV

PROBLEMS OF THE PACIFIC

EVER since the Great War the territories and interests of the British Empire in the Pacific have been left without adequate protection. In China, it is true, a fairly imposing squadron is now maintained, consisting of five 10,000-ton and one or two smaller cruisers, an aircraft-carrier, ten destroyers, and twelve submarines. Nevertheless, this force could not face the battle fleet that would be brought against it if the leading Asiatic Power were at war with us, and it is therefore not in itself a protection to our interests in the Far East.

Australia's defences have steadily crumbled until to-day they are much too weak to deter the least formidable aggressor. The greater part of the Australian squadron is laid up for reasons of economy, the only units in full commission being two 10,000-ton cruisers and five destroyers. New Zealand has only two small "D" class cruisers and a few auxiliary craft of no fighting value. At Singapore is stationed the old monitor *Terror*, which is not, strictly speaking, a sea-going ship. The East Indies squadron, based at Trincomali, consists of three more or less obsolete cruisers and a few sloops. Consequently, if all the above

Digitized by Google

squadrons were united they would still be too weak to offer effective resistance to attack on the scale which might be expected. Yet the Empire has no other naval forces nearer than the Mediterranean, 6,000 miles from the Pacific.

Recently, however, symptoms indicating the birth of a more vigorous policy of defence in the Pacific have been noted. Early in 1934 the Imperial Government decided to accelerate the completion of the new base at Singapore by adding £1,000,000 to the estimate for the work, and in March of that year the Admiralty gave its assurance that this extra expenditure would provide the Navy with "an adequate base properly defended." A few months earlier the Australian Government had begun to develop the naval station at Port Darwin, the northernmost Australian port, where new batteries and fuel depôts are being erected. The purchase of a new cruiser is also contemplated.* But in spite of these measures Australia is in no condition to defend herself and must continue to look to the Royal Navy for protection.

No clearer summary of our responsibilities in the Pacific could be presented than that which follows. It has been specially written for this book by Captain W. H. Thring, C.B.E., R.N., who as chief of the Australian naval war staff before and during the Great War has an unrivalled knowledge of strategical conditions and problems in the Pacific.

* The *Phaeton*, a cruiser of the 7,000-ton "Leander" class, originally built for the Royal Navy.

Digitized by Google

Captain Thring writes :—

" It is often suggested that our interests in the Far East are commercial; that we are there solely to make what we can out of the Asiatic peoples. There is another point of view which may be of far greater importance for the future of the human races. In the few thousands of years through which we are able to trace the history of mankind there are only two short periods during which Europeans have led the march of civilisation: from the rise of Hellenic Greece until the downfall of Rome, and from the Renaissance until the present day. We can be by no means sure that an Asiatic race may not again attain the lead. It is so much easier to stir up enmity than to promote goodwill, and to-day we see the majority of the political leaders of Europe walking in the broader path. Another European war may provide an Asiatic race with an opportunity to reign supreme.

" The point I would make is that the possession of Australasia will determine the future history of the world. If the white races can hold it their influence throughout the world can be maintained. If it is lost to us then ' Asia for the Asiatics,' under the lead of their most virile nation, will surely become a reality.

" We all know that it is very improper to

Digitized by Google

leave money or valuables lying about, and so to tempt men to wrong-doing. A similar responsibility clearly rests on nations which have desirable possessions. It is their duty to afford adequate protection to such possessions. In the Pacific at the present time we have to admit that both the United States and the British Empire are neglecting this duty, a duty not only to ourselves but to the type of civilisation, and to the ideals, which our forefathers handed down to us.

"Perhaps only those who have studied the subject on the other side of the world, and again after a return to England, can realise how difficult it is to retain the relative values at this great distance. To begin with, certain political facts must be recalled.

"Japan has always shown herself loyal to her treaty obligations and we have no reason to suppose that she will act otherwise in the future. Since the Elder Statesmen of that country passed away, political control has come into the hands of men of different training—men, one might even say, drawn from a totally different race. For some years it appeared to be uncertain whether the new leaders would follow the clear-cut line of policy of the Samurai, or would initiate some new plan. Of late, however, it seems plain that the old policy is to be followed.

"But their difficulties are very great. A

Digitized by Google

population already far too numerous for the country to support, and growing, it is said, by not far short of a million a year, requires some outlet. Formosa and Korea have proved useless for this purpose, chiefly because the natives of those lands will work for a lower wage than suffices for a Japanese labourer. The cold winters of Manchukuo are too severe for the Japanese, who refuses to settle there. He is, in fact, a bad pioneer colonist. He wants such lands as the developed fruit-growing districts of British Columbia and California, or the better parts of Australia.

"The future certainly holds some measure of industrial unrest for Japan. No one can foresee what type of government may emerge from the whirly-gig of politics to hold the reins of power when that time arrives, or what temptation may assail them. It is our duty to our fellow-citizens in Australasia, to ourselves, and no less to the Japanese, to make sure that we do not leave our valuable possessions lying about unguarded. On America, too, there lies a similar responsibility, and we know that she is alive to it. We shall find, I think, that our responsibilities are one and the same, and can be adequately discharged only if we assume them under a common understanding.

"Nor is it in any sense hypocritical to assert that our full discharge of this duty will be for the good of Japan, and of Asia as a whole, at

Digitized by Google

least as much as it will be to the advantage of our type of civilisation. It is therefore in no spirit inimical to Japan that I propose to discuss the situation which arises out of her determination to possess and retain a navy of the first class.

"We British have often boasted of our command of the sea, but it is doubtful if we have ever exercised a more complete command in any important area than Japan possesses to-day in Far Eastern waters. Japan has a navy which ranks as first-class throughout; her neighbours have no navies at all. Her statesmen are undoubtedly astute: why do they spend vast sums in maintaining such a force? We need not answer this question. It is enough to say that Japan could not have attained to her present position as a great Power, nor could she maintain that position, without the powerful fleet that is hers. But we should endeavour to realise what this 'fleet in being' means to us.

"It means some things that are all to the good. Cut-throat competition between European nations in the East is checked; piracy is kept within moderate bounds. When nations or races 'run amok' it has always been found necessary for one of the better-disciplined governments to restore order. Japan, in spite of reports to the League of Nations or the jealousy of other States, is the only

Digitized by Google

Power that is really capable of performing this task in the Far East. We should, perhaps, do better to applaud her efforts in this direction, trusting that she will see the wisdom of retaining the good-will of the world by the justice of her final settlements.

"Japan has, very correctly if one may say so, tried to solve her problem of over-population by means of emigration and industrialism. So far, emigration has failed; industrialism is doing much, but alone it cannot suffice. The problem is not yet solved, and yearly becomes more pressing. Sooner or later industrial unrest must assume serious dimensions. With great power at their command her rulers, observing rich foreign possessions 'lying around' practically unprotected, may be tempted to embark upon aggressive action. The United States, France, Holland, and ourselves all hold rich lands within reach of Japan. Since any one of these territories might be attacked, is it not to the interest of all concerned, and not less to that of Japan herself, that we should make it highly dangerous for her rulers to decide on a policy of aggression?

"Let us consider the general position. Japan has succeeded in defining an area in the Pacific within which other nations may not construct naval bases. In recent years she has got rid of the Chinese navy, eliminated a Russian and a German base, and rendered

Digitized by Google

Hong Kong insecure. That is to say that our statesmen, in agreeing to the restriction of naval bases, are content that Japan shall be paramount in that area.

"To realise the importance of the area in question we must get clearly into our minds the immense distances which make operations in the Pacific so different from those in other regions to which we are better accustomed. Even the British Admiralty is liable to overlook this fundamental difference, as that inexplicable expedition to Samoa clearly showed. At a critical time in 1914, when the Australian warships were operating against the *Scharnhorst* and *Gneisenau*, they were withdrawn after six irreplaceable weeks to convoy a perfectly useless expedition against the German territory in Samoa.

"To return to our distances. From Yokohama to Sydney, the most exposed of the Australian capitals, is about 4,500 nautical miles, this being half as far again as from Plymouth to New York or about as far as from Plymouth to Panama. For our fleet to use Singapore as a base against this line of advance is much the same as using Portsmouth as the base for a fleet operating on the coast of the United States. This is the sort of scale to which we must accustom ourselves in considering the strategical problems of the Pacific.

"By obtaining the Marianne and Caroline

Digitized by Google

groups of islands—previously owned by Germany—the Japanese have gained possession of harbours which place them much nearer to Australia and the Philippines. Truk is some 1,900 miles on the way from Japan to Sydney; the Pelew group is within 500 miles of the nearest point of the Philippines.

"We cannot, of course, keep—perhaps not even send—a force to the Far East capable of aggressive action against Japan. Nor, seemingly, could the United States do so, unless they were able to base their fleet at first in Australia and then to work up towards Japanese waters by way of the Philippines. On the other hand, we could and should take such measures as would render any aggressive action against our territories very dangerous and unlikely to succeed in the long run.

"To cover our communications with Australasia and our responsibilities in India and the South African Dominions we must so arrange matters as to make the passage of enemy ships through Dutch East India waters into the Indian Ocean a highly perilous undertaking. For this reason we require bases at each end of the line of islands. Singapore has been chosen for the western end. Of late there has been some talk of using Port Darwin, in Northern Australia, for the eastern extremity.

"Australia has been unfortunate in her

Digitized by Google

choice of naval bases, and mistakes have been made which have proved very costly. In the 'bad and wicked days before the War' it was said that Australian politicians would never consider any site for a naval base unless it required perpetual dredging. Port Darwin certainly fulfils this requirement. It possesses about a quarter of a mile of hard foreshore, which is neither suitable nor available for naval purposes, the rest of the harbour being surrounded by mud banks backed by mangrove swamps. Even at great cost it would be almost impossible to provide adequate defences. Unfortunately Port Darwin possesses a strong political 'pull,' but when the site is seriously considered as a naval base its claims must surely be rejected. Fortunately, however, nature has provided a far more suitable locality for use as a base, the position of which need not be specified here.

"It is well to remember that Japan is vulnerable at several points. Without going into details, her lack of oil, coal, and—far more important—rice, is an economical factor which an opponent would not fail to exploit. A still greater weight in the balance of peace is her need of markets for her industrial products. In this respect China and Korea will not suffice; she simply must have other markets. In order to keep these open to her goods she must retain the good-will of other countries,

Digitized by Google

if not of the world. If, therefore, she knew as an assured fact that markets would be rigidly closed against her if she took aggressive action, the countries which have possessions in the Far East might feel fairly secure. This seems to be an obvious line of policy for those countries to adopt. But at the same time aggressive action should be made directly and definitely dangerous.

"To sum up. The future of our Western civilisation depends on the continued possession of Australasia. This territory should be regarded as the key to the *status quo* in the Far East. None of the nations owning property there can afford to let any one of the others be ousted.

"Japan must provide for a rapidly growing population. The establishment of new industries is not enough; the emigration of her surplus nationals must be made possible. Unless this is done an outbreak is only a question of time.

"It is the duty of nations, as of individuals, not to leave valuables lying about unguarded. We must make any attack on the British Empire's Far Eastern components a thoroughly dangerous operation. This is a task our forefathers worthily accomplished, and we, too, must do our part."

Few will take exception to this sober and authori-

Digitized by Google

tative presentation of the politico-naval situation in the Pacific, the evolution of which may have far-reaching reactions on the welfare of the whole British Commonwealth. The inadequacy of our present defences in that ocean is an open book that all may read. It would, however, be detrimental to our relations with Japan were that Power encouraged to believe not only that British possessions in the Pacific are now virtually unguarded, but that under no circumstances could they be defended against resolute assault. That impression has, unfortunately, been conveyed by the views to which certain British writers on naval affairs have recently given utterance.

As a natural consequence, Japanese spokesmen are assuring their countrymen, and even foreigners, that the British Navy is reduced to impotence in the Far East and could take no effective action in the event of local British territories and interests becoming endangered. This is a delusion which, unless corrected, may become a disturbing factor in Anglo-Japanese relations. However upright and peace-loving a people the Japanese may be, it is tempting Providence to proclaim aloud the inability, or the unwillingness, of the British Empire to defend by force possessions which to an overcrowded, virile nation must appear as so many glittering prizes to be grasped almost without effort.

Nothing in Japan's record warrants the suspicion that she cherishes designs on British property—but never before has Britain given the world cause

Digitized by Google

to think that she is powerless to safeguard British territory. The shrinkage of our naval forces in the Far East and in Australasian waters, coupled with the necessarily public discussion on the value of the new Singapore base, has fostered the idea that henceforth we are content to leave our property in the Pacific undefended, its security no longer dependent on our own strength but on the benevolence of a foreign Power.

As Captain Thring has so clearly explained, the immense distances between key positions in the Pacific tend to complicate the strategical problems of attack and defence in that ocean. Lord Salisbury's advice to his countrymen, "study large maps," is much to the point in this case. If that advice be followed, and a chart of the Pacific is scrutinised with some knowledge of the physical limitations of modern naval material, the student will probably agree with Captain Thring and other authorities that direct aggressive action against Japanese territory is beyond the power of the British Navy *as it now exists*.

But it is one thing to admit this, and quite another to conclude therefrom that if Japan attacked British territory in the Pacific the British Navy would be powerless to interfere. In the first place, those who reach that doleful conclusion are obviously thinking of the British Navy in terms of its present shrunken dimensions and are assuming that it could not, or would not, be reinforced in case of emergency. Have they forgotten what happened

Digitized by Google

in 1914–18? If so, it is time their memories were refreshed.

> "For more than four years the shipyards of the United Kingdom had been working at high pressure to meet the insatiable demand for fighting tonnage. Between the outbreak of hostilities and the Armistice, a period of fifty-one months, close upon 2½ million tons were added to the Fleet, a total exceeding the output of the previous twenty-five years. The net increment, after deducting war losses, was 706 vessels. At the date of the Armistice the White Ensign was flown by 1,354 combatant vessels, with an aggregate of 3,250,000 tons, forty-two of these being capital ships of the Dreadnought type. There were 109 cruising ships, 13 aircraft-carriers, 527 destroyers and torpedo-boats, and 137 submarines. In actual fighting potency the combined fleets of the other Allied and Associated Powers were overshadowed by this gigantic force.*

What Britain has done once she could do again. Were any part of her territory, whether near or remote, to be threatened with foreign invasion, all the resources of the Empire would be mobilised to thwart the aggressor. New fleets would, if necessary, be called into being, and just as the expansion of the Navy in 1914–18 was governed, technically, by the conditions obtaining in the main theatre of war, which happened to be the North

* "Navies and Nations," by H. C. Bywater. (Constable.)

Digitized by Google

Sea, so would the creation of new naval forces to defend or reconquer the remotest territories of the Empire be undertaken with due regard to the special circumstances of the case. Those who doubt these statements have either not read the history of Britain or are confusing exceptions—*e.g.* the first Boer War and the failure to relieve Gordon at Khartoum—with the rule that every campaign undertaken by Great Britain must at all costs be pressed to a victorious conclusion.

The geographical obstacles which impede the defence of British interests in the Pacific are serious, but not insuperable. Singapore and the Australian ports are not the only bases from which a British fleet, steadily reinforced as it would be, might project its power in an ever-extending arc. For obvious reasons it is not advisable to name all the territories which represent potential British bases in the Western Pacific. Several, distinct from Singapore, Port Darwin, etc., have been publicly mentioned; others, less obvious to the casual observer, are well known to naval strategists. The rolling wastes of the Pacific may be difficult to bridge, but they are not unbridgeable. For the rest, measured by material resources and power of economic endurance, the British Empire would be as formidable an opponent as any in the world. Recognition of these facts will do much to foster international peace.

Happily it is possible to assert with complete truth that the idea of conflict with Japan is utterly repugnant to the British peoples. They have not

Digitized by Google

forgotten the alliance which for two decades was sustained with equal loyalty by both parties. While, no doubt, it left Japan free to cultivate her local interests without fear of molestation, it also enabled Great Britain to concentrate her naval strength in European waters to front the German menace. No alliance in modern history ever justified itself more completely, and the memory of those twenty years of political and personal comradeship will not lightly be erased.

In the immediate post-War period a certain coolness was perceptible in Anglo-Japanese relations. There were revelations, belated to the majority in this country, of Japan's high-handed actions in China and Siberia while the rest of the world had been preoccupied with Armageddon. These disclosures left a disagreeable impression which was for a time deepened by the anti-Japanese propaganda of interested or ill-informed parties. The Shanghai incident, and, more recently, the forcible severance of Manchuria from the Chinese Empire and its establishment as the Japanese protectorate of Manchukuo, threatened to confirm the growing suspicion that Japan was controlled by a militarist régime whose ideals were incompatible with world peace.

Oddly enough, the violence of the propaganda against Japan ultimately brought about a revulsion of sentiment in Great Britain. In the opinion of many, perhaps of most, British observers of the proceedings at Geneva which culminated in Japan's

Digitized by Google

withdrawal from the League of Nations, the honours rested with Japan and not with her detractors.

Through the smoke-screen of rhetoric and moral indignation—expressed most loudly by member-States of the League which had no interests whatever in the Far East—the world began to see the Manchurian problem in the cold light of reality. It saw a great province, formerly ravaged and made desolate by hordes of bandits over whom the Chinese Government could not or would not exercise the slightest control, being redeemed from anarchy and transformed into a comparatively peaceful and prosperous domain. If the *Pax Japonica* is the only alternative to chaos, few British people will hesitate to make their choice. After all, the foundations of the British Empire were laid by methods differing little from those since employed by Japan on the Asiatic Continent.

What the years may bring forth none can foretell. Reference has been made in this chapter to the economic factors which eventually may compel Japan to seek more elbow-room, more breathing-space than her present boundaries permit, and so bring her into conflict with one or other of the Powers which have desirable territories in the Pacific. A knowledge of the risks attending such a policy—and, as I have endeavoured to show, they would be truly formidable were Naboth's vineyard situated in British territory—is the strongest guarantee against precipitate action, and, therefore, the best safeguard of peace in the Far East.

Digitized by Google

CHAPTER XVI

BRITAIN AND THE CONTINENTAL FLEETS

FRENCH sea power always has been and always must be an object of interest to the British people. For centuries the French fleet remained the greatest potential menace to this country, either by itself or, more often, as the principal factor in a hostile coalition, and its strength largely dictated the size of our own navy. For ten years after Trafalgar, with only a brief intermission, British shipping continued to be harassed by French cruisers and privateers and suffered extremely heavy casualties. Within the same period, during which France possessed no battle fleet "in being," nearly two hundred British men-of-war were lost either as the result of enemy action or through other causes arising out of our armed feud with France.

At a time like the present, when dictators and political philosophers in more than one country are talking about the "inevitability" of war, proclaiming its biological necessity, and arguing that fighting is as natural to man as maternity is to woman, it is opportune to recall one rather significant circumstance. After the final downfall of the first Napoleon there was probably not one intelligent European in a score who believed that the peace

Digitized by Google

between those age-old, inveterate enemies, England and France, could be preserved for more than a decade, if as long. Yet what must have seemed to all a precarious truce has already endured for one hundred and twenty years. That is surely a noteworthy fact, containing food for thought.

It is quite true that causes other than a love of peace for its own sake helped to tide over the several crises which threatened, between 1815 and 1904, to bring the two countries into conflict once more. Both, for example, were engaged in the task of colonising overseas and in the little wars which this process entailed. France, too, was preoccupied with the problem of rebuilding her political structure, which had been shaken to its foundations by successive earthquakes of revolution and war. Britain on her part was tapping with feverish intensity those immense deposits of coal and iron which were to make her for the next hundred years the world's foremost industrial State. But is it too much to assume that underlying all this healthy absorption in peaceful enterprise there was in both countries a sub-conscious recognition of the futility of prosecuting the vendetta on which so much blood and treasure had been squandered?

Throughout the nineteenth century the French Navy was developed on lines which indicated Britain as the prime objective. Many capital ships were built, it is true, and for some years after the advent of the ironclad France was in a position to

Digitized by Google

impeach our battle fleet on equal terms. But the great armoured ship with its big guns was never as popular across the Channel as in this country. Since Trafalgar, if not from a much earlier date, the French school of naval strategy has favoured the oblique attack instead of the pitched battle of squadrons, the *guerre de course* rather than the seeking for a decision by preponderance of weight.

Whether they knew it or not, the Germans in 1914–18 were putting into practice the theories of naval strategy which originated in France. The evasive handling of the High Seas Fleet, the *Emden–Karlsruhe* operations, and eventually the submarine campaign—all these methods of waging war at sea had been advocated by French strategists long before Germany became a naval Power of importance. If for submarines we read torpedo-craft and fast, lightly-armed cruisers or privateers, the analogy between the French naval plan of the 'eighties and the German naval plan of 1914–18 becomes almost perfect.

Nor, so far as France is concerned, has there been any appreciable departure from those principles in the post-War period. When in 1922 a decision was taken to rebuild the fleet, which had been heavily depleted by war casualties and the virtual suspension of building for six years, the choice fell on fast cruisers, torpedo craft, and submarines. No battleship construction was contemplated, though the expenditure of large sums on modernising such vessels of this type as remained

Digitized by Google

on the active list showed that France had not entirely lost faith in the heavy ship. Then, in 1929, Germany sprang a surprise by laying down the first "pocket battleship," the design being hailed as a technical *tour de force*. No man-of-war since the original *Dreadnought* has been so widely advertised.

The *Deutschland*, as the prototype is named, is a cruiser in tonnage but a battleship in armament. That the first reports of her fighting value were exaggerated is now generally admitted. On paper she could easily despatch any cruiser of her own size (10,000 tons), but as her speed of 26 knots is 6 knots below that of the slowest modern cruiser she would find difficulty in bringing such a vessel to action. It is suggestive that Peter A. Martini, one of Germany's younger naval publicists, has recently published a brochure in which the "Deutschland" class is roundly condemned as a blunder.* All things considered, it is difficult to resist the conclusion that in preparing the "pocket battleship" design Germany was more desirous of impressing the world with her cleverness than of building the warships best suited to her requirements.

Be that as it may, the new naval phenomenon was taken very seriously in France. There it was pointed out, with some truth, that the German ship could make short work of any French cruiser and was much too fast to be run down by an

* "Deutschland braucht andere Kriegschiffe!" by P. A. Martini. (Munich, 1934.)

Digitized by Google

ordinary battleship. For this reason the *Deutschland* was held to constitute a serious menace, not to be ignored. Vast sums had been spent on the cruisers, the large flotilla leaders, and the swarm of submarines of which France was justly proud, but none of these fine craft, it was admitted, could challenge the miniature German dreadnought.

At length, after prolonged discussion in the Chamber and the preparation of many alternative designs by the Ministry of Marine, the keel of the *Dunkerque* was laid in the autumn of 1932—the first capital ship to be put on the stocks in France for nearly twenty years. As a reply to the *Deutschland* the *Dunkerque* is overwhelming. Her displacement is 26,500 tons as against 10,000; to the German's battery of six 11-in. she opposes eight 13-in., and her armour and under-water protection is incomparably superior. Not only is she four knots faster, but her greater size and length will enable her to steam at high speed in weather that would seriously inconvenience the smaller German vessel. A second *Dunkerque* was ordered in 1934, and further units of the class are projected.

As an index to the naval aims of France, her post-War building programme is not very helpful. It embraces vessels as potent for attack as for defence. Nevertheless, the fundamentally defensive character of her naval armaments is admitted by impartial observers. France has extensive and vulnerable seaboards in the Atlantic and the Mediterranean; she has also a great colonial empire the resources of which, especially in man-power, are indispensable

Digitized by Google

to her in war. The navy, therefore, is charged with the dual task of guarding the sea frontiers and ensuring the safety of the maritime *routes militaires*, primarily those which lead from North Africa to the coast of Provence.

French strategists showed little appreciation of the influence of sea power during the Great War, but since then there has been a great awakening. Military critics are at one in emphasising the necessity for a strong fleet. For the past ten years the naval budget has been strongly supported by the soldiers. In the last conflict France enjoyed all the advantages of alliance with the supreme naval Power, and except for the comparatively short period when German submarines appeared to be gaining the upper hand she had no cause to worry about her communications. It is because France has no guarantee of British assistance in a future struggle that she is devoting marked attention to her sea forces.

Why her post-War building programmes should contain such a high percentage of submarine tonnage is a mystery not yet satisfactorily explained. At the Washington Conference France was courteously invited to give reasons for her large submarine demands. She was able to reply only in general terms which failed to carry conviction. Since then the same question has been put repeatedly, but no answer save a vague reference to the value of the submarine as a defensive weapon is ever vouchsafed. It is unfortunate that France should concentrate her naval effort on the develop-

Digitized by Google

ment of the one arm which, in British eyes, symbolises ruthless aggression and destruction. Her immense submarine fleet, by far the largest in the world, may be defensive in the sense that its existence might deter any Power which was exceptionally vulnerable at sea from challenging French policy however irksome, or even menacing, to its interests that policy might be.

Quite apart from its formidable powers in war, the French submarine fleet is, no doubt, a very valuable political weapon. Nowhere is this fact more clearly realised than in Great Britain, the country most susceptible to submarine attack. If Anglo-French relations were to-day as unfriendly as they were in the Victorian era, this country would be under no illusion as to the meaning and purpose of French submarine expansion. It is precisely because those relations have since become cordial that British observers are perplexed by the actions of their friendly neighbour. France makes no secret of her conviction that Germany is *the* prospective enemy. But Germany is an unpromising target for submarine attack, the threat of which would certainly not deflect her for a moment if she meditated a fresh assault on France; nor could a thousand French submarines exercise a decisive influence on a struggle with Germany. And the same remark is almost equally applicable to a struggle with Italy, which appears to rank second in the list of France's potential foes.

Since, therefore, undersea supremacy contributes

Digitized by Google

nothing to the security of her land frontiers, we are bound to ask whether it has made her safer at sea. Recent events supply the answer. After legislating for about eighty submarines in ten years France suddenly found, or thought she found, her naval plans completely upset by the appearance of the German "pocket battleships." What was her retort? Did she lay down still more submarines, the weapon which for ten years had been acclaimed by her experts as the most potent in the whole naval armoury? On the contrary, she decided it was necessary to build two capital ships to counterbalance the new German vessels. In making this decision she tacitly condemned her previous naval policy as unsound.

No intelligent Briton credits France with hostile designs on his country, and with Europe in its present state no sane Frenchman is likely to visualise Great Britain as an active enemy. What, then, is the underlying purpose of French submarine policy? May we not, in all friendliness, advance the theory that France, the undisputed pioneer in undersea navigation, has succumbed to the spell of her own creation, and is continuing to multiply submarines without any clear-cut notion of the use to which they are to be put? This suggestion may seem far-fetched, but there are historical precedents for such a policy. Nearly fifty years ago France produced an armoured cruiser—*Dupuy de Lôme*—which excited the admiration of the naval world. For the next twenty years

Digitized by Google

she proceeded to ring the changes on this prototype until she found herself burdened with a whole fleet of ships that were veritable white elephants. Again, in the 'eighties the small, high-speed " torpilleur " was hailed as the infallible destroyer of the battleship. These little craft were built by the score, and their construction continued long after their reputed powers had proved illusory. In those days Admiral Aube was the chief exponent of the " mosquito " school, just as Admiral Castex is now the foremost champion of the submarine " stingray."

In the spring of 1934 it was my privilege to visit the French submarine base at Toulon, to inspect several of the latest boats, ocean-going and coastal, and to meet their officers and men. The impression left by this visit was that in design and workmanship the modern French submarine is second to none in the world ; that the personnel is competent, highly-skilled, and thoroughly sound in moral. For what it is worth, my personal conviction is that France possesses in her submarine fleet a weapon of tremendous offensive power if used as the Germans used their U-boats in 1914–18. It is just because one cannot imagine French naval officers practising " frightfulness " that the purpose of this wholesale submarine construction remains obscure. Should it continue, the outlook for naval disarmament will go from bad to worse. However reluctant Great Britain may be to regard France as a potential enemy, she cannot be indifferent to the

Digitized by Google

growth of a vast submarine armada almost at her doorstep. At any given date in 1934 the number of submarines at Cherbourg and Brest exceeded the total that Germany possessed in August, 1914.

If for no other reason, the instinct of self-preservation will compel Britain, sooner or later, to expand her anti-submarine forces. At all costs, and in the interests of France herself, the balance of power must be maintained in European waters. Fortunately, the trend of events seems to be modifying the French passion for submarines. In recent years the rate of production has sensibly diminished; annual programmes have shrunk from nine boats to a mere brace, and under the dual pressure of German and Italian competition France has been compelled to revert to capital ship and cruiser construction at the expense of submarine development.

Her navy as a whole presents a marked contrast to that of pre-War days. Apart from an inflated submarine tonnage it is organically well-balanced and homogeneous. All vessels built since 1922 exhibit the highest class of design and workmanship. The later group of 10,000-ton cruisers with their robust protection; the splendid "flotilla leaders"—actually 3,000-ton light cruisers—with their amazing speed and powerful armament; the submarines large and small which are not accepted until they have made independent cruises of several thousand miles without mishap, these are technical achievements of which France has every reason to be proud. As for the personnel, it is

Digitized by Google

probably as good as it can be under the short-service system. From my own observation I can testify to the high standard of discipline prevailing in the modern French Navy. Methods of discipline must always be adjusted to suit national temperament; the ideal system for one navy might be fatal for another. French naval officers appear to have discovered the happy mean.

In fine the French Navy of 1934–35 must be treated as a political factor of very considerable weight. Relatively it holds a commanding position in Europe, and but for the unsolved mystery of French submarine policy Britons would be the first to welcome this healthy renaissance of the sea power of a friendly and peace-loving neighbour.

A full and clear statement of the objectives of French naval policy will be found in the appendices. Communicated to me personally by the Minister of Marine, Monsieur François Piétri, in the course of an interview in Paris, in April, 1934, it is the most authoritative pronouncement on the subject which has, up to now, been released for publication. One or two particularly significant passages may be quoted here :—

> " Les causes déterminantes de la création des Marines française et anglaise sont restées les raisons éssentielles de leur pérennité. Pendant trois siècles, elles se sont développées côte à côte, parallèlement, toujours rivales, souvent ennemies, parce qu'elles poursuivaient

Digitized by Google

les mêmes objectifs. Ennemies, mais toujours loyales, aussi leur combats si sanglants qu'ils fussent n'ont pas laissé de rancoeurs.

" Enfin les deux peuples les plus évolués du monde ont senti la vanité de ces luttes fratricides. Ils ont compris qu'il y avait place pour tous sous le soleil, que la mer n'appartenait à personne et n'était qu'un lieu de passage ouvert à tous, que d'immenses territoires restaient disponibles pour l'activité des peuples de race blanche.

" La flotte française ne doit donc en aucune mesure inquiéter l'Angleterre, pas plus que la flotte anglaise qui reste la première du monde ne doit inquietér la France. Bien au contraire, toutes deux doivent collaborer au maintien de la sécurité et de l'ordre dans le monde."

. . . . .

The Italian Navy of to-day is almost entirely the creation of the Fascist régime. When Signor Mussolini took office in 1922 the naval forces were at a low ebb. The material was inadequate and much of it obsolete. War-weariness aggravated by subversive propaganda had its inevitable effect on discipline. As a fighting instrument the Italian fleet of those days was not formidable. Since then it has been completely reorganised and largely rebuilt, with a corresponding gain in relative strength. At the present time it is but little inferior to the French fleet in up-to-date material, and there

Digitized by Google

is no reason to believe it less efficient in personnel and training.

During a recent visit to the Italian naval bases I had opportunities of inspecting representative ships of every class and of watching them at work. The ships themselves and their equipment are fully up to the highest present-day standard, and in some respects, notably in gunnery devices, they are superior to any that have come under my observation elsewhere. In the " Condottieri " class Italy has twelve cruisers forming a tactical unit of unrivalled mobility and power. From the technical point of view the earlier ships of this group are quite as remarkable as the German " pocket battleships."

Displacing only a fraction over 5,000 tons, they have machinery of 95,000 h.p., and an armament of eight 6-in. guns, six 3·9-in. anti-aircraft and eight smaller guns, besides four torpedo tubes. The designed speed of 37 knots has in every case been bettered on trial to the extent of three knots or more. Nor must it be supposed that in compressing so much machinery and armament into a comparatively small hull the designers have sacrificed strength or seaworthiness. The ships behave well in bad weather and can make their contract speed when fully loaded and ready for action. Of the seven 10,000-ton cruisers already built the last four are strongly-armoured and, probably, better all-round fighting ships than the lightly protected British " County " cruisers. Always partial to the destroyer, Italy has developed this type on lines of her own and produced a large and thoroughly

Digitized by Google

efficient flotilla. It is true that the design of her "Condottieri" cruisers and of the latest destroyers bears the stamp of Mediterranean strategy, for the steaming radius of these vessels is limited. But the fleet as a whole is definitely a sea-going, not to say an ocean-going, force, and its political influence extends far beyond the confines of the Mediterranean.

The aims of Italian naval policy have been expounded by Signor Mussolini with characteristic vigour.

> "From a geographical standpoint Italy, more than a peninsula, is an island. The maritime frontiers of France are 2,850 kilometres; of Italy as many as 8,500 kilometres. Such insularity is not eliminated owing to the land frontiers; indeed, one could say it is intensified, because the 1,920 kilometres forming our land frontiers are made up of a mountain chain, the highest in Europe, crossed by fourteen railway lines, twenty-seven State highways, and eight ordinary roads. All the rest of it is impassable.
>
> "All of Italy is on the sea. Thirty capitals of provinces are on the sea; even Rome itself is on the sea. Geography is an unchangeable fact that determines the destinies of people. The historical objectives of Italy have two names: Asia and Africa. South and East are the cardinal points that should excite the interest and will of Italians. There is little

Digitized by Google

> or nothing to do towards the North, nor towards the West, neither in Europe nor beyond the ocean. These two objectives of ours are justified by geography and history. Of all the great Western Powers of Europe, Italy is nearest to Africa and to Asia. A few hours by sea and much less by air are enough to link up Italy with Africa and with Asia.
>
> "Let nobody misunderstand the meaning of this century-old task that I assign to the present and to the future Italian generations. Territorial conquests are not aimed at, and this should be heard by all, both near and far; but a natural expansion that should lead to collaboration between Italy and the peoples of Africa, between Italy and the Eastern nations, both immediate and mediate."

Thus Signor Mussolini. His words could no doubt be interpreted as an admission that the Italian armed forces have not been created solely for the defence of the homeland, but exist to support, if need be, the overseas expansion of the Fascist State. It is in that sense that they are read in France, which owns all the most desirable territory in that part of Africa lying nearest to Italy. For this and other reasons—not unconnected with the *entente* which appears to have been established between Rome and Berlin—France views Italian naval development with a certain anxiety.

Not to mince matters, the two Powers are avowed rivals at sea. There is little doubt that but for

Digitized by Google

financial stringency Italy would already be building keel for keel against France. Even as it is she has matched cruiser for cruiser; she is virtually equal in torpedo craft, and is rapidly reducing the French lead in submarines. In June, 1934, she played a trump card by ordering two 35,000-ton battleships —the largest permissible under international treaty —as a reply to the two French units of the "Dunkerque" class, each of 26,500 tons. And that is not the whole story. It is reported on good authority that the four Italian dreadnoughts, "Doria"–"Cavour" class, completed in 1914–16, are undergoing a radical reconstruction that will raise their speed from 21–22 knots to 26 knots, greatly improve their protection, and, at the cost of suppressing one turret, leave each ship with a broadside of ten 12-in. guns of a new, high-velocity model. If these reports are true Italy will soon possess a battle fleet little if at all inferior to that of France in artillery power and greatly superior in mobility.

From the British point of view this Franco-Italian naval rivalry is wholly regrettable. We are, and desire to remain, on the friendliest terms with both countries. We have been comrades-in-arms with both. Britons of the older generation do not forget that Italy was almost our only friend in the world during the last South African War. When every other hand was against us, that of Italy was extended in friendship and understanding. Throughout those trying two and a half years Italy was the only country in which British residents

Digitized by Google

and visitors felt themselves secure from insult. Such memories endure.

Yet by the irony of circumstance France and Italy are responsible in large measure for our current naval anxieties. Their joint building activities, certainly not directed against ourselves, have none the less hopelessly compromised the balance of power which this country had in mind when it signed the London Naval Treaty. Figures are apt to be tedious, but the statistics of Franco-Italian submarine construction alone will explain the seeming paradox. Since the treaty was signed close upon thirty boats have been added to the combined total foreseen at that date.

Is it any wonder that British naval authorities are pressing for a larger measure of anti-submarine tonnage? It is not easy to visualise either France or Italy declaring an "unrestricted" submarine campaign against British shipping. But ever before the eyes of our strategists is our unique vulnerability to that form of attack, and they would be failing in their duty if they ceased to press for more reliable safeguards than we now possess.

These matters will, it is hoped, be thrashed out at the forthcoming naval conference, which promises to be the most fateful gathering of its kind ever held. Either the expansion of the Continental submarine flotillas must be definitely arrested and their present numbers scaled down, or Great Britain must build counter tonnage in adequate proportion. We simply cannot acquiesce permanently in the existence of a standing menace

Digitized by Google

to our shipping in the Channel approaches and the Mediterranean.

Nor can we afford to ignore the steady growth of the Japanese naval forces, which are already approaching the maximum permitted by treaty. The stabilisation of Japanese sea power is almost the only maritime interest which we and the United States have in common, and the method by which this problem is approached when the time comes for round-table negotiation will be the measure of Anglo-American statesmanship.

Germany is, as it were, the dark horse in the naval race. Her present fleet is widely regarded as a mere token of what is to come. It says much for her ingenuity that without in any way infringing the Versailles Treaty she has contrived to plant a bombshell in the concert of big naval Powers. By springing the mechanical surprise of the " pocket battleship " she has already upset conventional calculations of tons and guns. Three 10,000-ton " Deutschlands " produced two French 26,000-ton " Dunkerques," which have since begat two 35,000-ton Italian mastodons. There could be no more convincing illustration of the futility of excluding any Power with maritime pretensions from a consortium which seeks to stabilise the world's naval armaments. The smoothest-running machinery which it is in the wit of diplomacy to devise is liable at any moment to be thrown out of gear by a malcontent's monkey-wrench. If the next naval conference is to achieve results of permanent value, Germany, at any rate, ought to be invited.

Digitized by Google

APPENDIX I

THE WORLD'S LEADING FLEETS IN 1935

Ships built, building and authorised.	British Empire.	United States.	Japan.	France.	Italy.	Germany.
Capital ships .	15	15	9	11	6	7
Heavy cruisers (10,000 tons) .	15	27	12	7	7	—
Light cruisers .	40	10	23	13	19	6
Aircraft-carriers .	6	6	5	2	1	—
Flotilla leaders .	22	8	—	31	16	—
Destroyers .	166	283	112	49	78	20
Submarines .	64	90	70	110	67	—

Note.—This table is for general reference purposes only. As a guide to comparative strength it is misleading. Many of the vessels enumerated are, or soon will be, obsolete and useless for war duty. For example, no less than 23 cruisers out of the British total of 55 are of pre-Armistice date. Conversely, all the U.S. and most of the Japanese, French, and Italian cruisers are of modern construction. In the British and Japanese columns a few cruisers of 7,100 to 8,390 tons have been included in the "heavy" class because they mount 8-in. guns.

APPENDIX II

NOTES ON COMPARATIVE NAVAL STRENGTH IN 1935–36

In modernity and in number of heavy guns the British battle fleet is outclassed by that of the United States. For every £1 spent by Great Britain in modernising old battleships the U.S. has spent £2.

Digitized by Google

The position in regard to post-War cruisers—the only ones likely to count in a future war—is as follows :—

	British Empire.	United States.	Japan.	France.	Italy.
10,000-ton, 8-in. guns . . .	13	18	8	7	7
Smaller 8-in. gun ships . . .	2	—	4	—	—
10,000-ton, 6-in. guns . . .	—	10	—	—	—
9,000–7,000-ton, 6-in. guns . .	13	10	4	9	—
Smaller 6-in. gun ships . . .	4	—	14	3	12
Total . .	32	38	30	19	19

The U.S. superiority in cruisers is considerably greater than these figures indicate. Their total tonnage is 350,000, giving an average of 9,224 tons per ship. The British total is 268,400 tons, representing an average of 8,380 tons per ship. The aggregate armament of the two cruiser fleets is as follows :—

	British.	United States.
8-in. guns . . .	116	164
6-in. guns . . .	148	262
Total weight of metal discharged . .	42,800 lb.	68,510 lb.

APPENDIX III

PERSONNEL OF LEADING NAVIES

Great Britain	92,338	
United States	109,886	122,558
Do. Coastguard operating as part of the navy in war	12,672	
Japan	88,200	
France	58,000	
Italy	55,000	

Both the United States and Japan have considerably larger reserves than Great Britain.

Digitized by Google

APPENDIX IV

NOTES ON OIL SUPPLIES IN WAR TIME

The United States possesses an immense advantage over all other naval Powers (except Russia) in that she has an inexhaustible supply of fuel-oil within her own borders. Great Britain, on the other hand, has to import practically the whole of her fuel-oil supplies, the average voyage of each oil-tanker being 4,500 miles. Japan, too, is dependent upon imported oil. These facts would seem to have a definite bearing on the number of cruisers, etc., which each Power requires for the protection of its imported essential commodities, among which oil occupies a most important place.

APPENDIX V

CURRENT BUILDING PROGRAMMES OF THE FIVE LEADING NAVIES, 1934–35

Great Britain.—Three 9,000-ton cruisers, one 5,200-ton cruiser; one aircraft-carrier; one flotilla leader, eight destroyers, three submarines.

United States.—Four 10,000-ton cruisers, one to be armed with 8-in., the others with 6-in. guns; two large flotilla leaders, twelve large destroyers, six submarines.

The following is a general survey of U.S. construction in hand and authorised:—

	Ships.	Tonnage.
Already building (1934) . .	54	226,080
To be laid down in 1934–35 .	24	69,500
,, ,, 1935–36 .	21	44,700
,, ,, 1936–37 .	20	37,650
,, ,, 1937–38 .	19	35,800
,, ,, 1938–39 .	18	34,500
Total	156	448,230

The total expenditure is estimated at slightly less than

Digitized by Google

£200,000,000. This, however, does not include guns or armour, which will absorb a further £60,000,000 or £70,000,000.

Completion of this programme will give the U.S. a navy of the full strength permitted by existing treaties, and consisting entirely of up-to-date vessels in every class except battleships.

Japan.—Two 8,500-ton cruisers, one 5,000-ton cruiser minelayer, six destroyers, three submarines.

France.—One 26,500-ton battle cruiser, one flotilla leader, two submarines.

Italy.—Two 35,000-ton battleships, various small craft.

APPENDIX VI

THE OBJECTIVES OF FRENCH NAVAL POLICY

The following statement was personally communicated to the author by the French Minister of Marine, Monsieur François Piétri, in April, 1934:—

Whatever troubles may have beset France in the course of the last four centuries, the naval problem has always been, and still remains, the object of her preoccupations.

Indeed, history shows us that the naval factor has almost always been one of the elements determining her destiny.

Geography explains this influence. Whether the French will it or not, France confronts four seas. To play their political, economic or moral rôle, the sea offers them the historic highway for the transport of moral or material power. This is the route by which merchandise also travels.

This has been understood by the great statesmen of all countries: they have simultaneously developed navigation and trade, elements inseparable from the wealth and power of a State.

From the fifteenth century onwards, the western Powers of Europe—England, France, Spain, Portugal and Holland—secure for a time against danger from within or without, turned towards the world and established themselves in Africa, America and Asia. The cultivation of colonies brought with it an extraordinary development of commerce. The mercantile marine was its instrument; the naval forces came spontaneously into being for the protection of commerce, lines of communication, and settlements abroad.

Digitized by Google

The causes which determined the creation of the French and English navies remain the essential reasons for their continuance.

For three centuries they have developed side by side, in a parallel direction, always rivals and often enemies, because they were following the same objectives. Enemies, but always honourable enemies, so that their battles, however bloody, have left no heritage of rancour.

At last the two most highly evolved peoples in the world came to realise the futility of this fratricidal struggle. They understood that there was room for all under the sun, that the sea belonged to no one and was simply a thoroughfare open to all, that immense territories were still available for the activities of the white nations.

For more than a hundred years no conflict has broken out between the two peoples. When their navies have fought, they have fought side by side, either to maintain the equilibrium of nations, or in the defence of liberty and right.

This parallelism of the destinies of the two navies persists in our own time. If England has the foremost colonial empire of the world, France has the second. Three great dominions extend French influence in Africa; these are North Africa, which looks on the Mediterranean, West Africa, whose natural route is the Atlantic, and Madagascar, washed by the Indian Ocean. A fourth, Indo-China, opens on to the Pacific.

Several distant possessions or mandated territories adjoin those of Britain, in the Eastern Mediterranean, the West Indies, and the South Seas.

All these territories, extending over 11 million square kilometres, and whose population exceeds 52 millions, have their moral, political, and economic centre in Paris.

The French Navy exists to ensure liberty and protection for communications extending over the 30,000 *miles of maritime routes which link France with her overseas territories.*

How ought this Navy to be constituted?

Judged by her needs, France would have the right to claim the second rank among the fleets of the world. She does not do so, however.

In the present state of international relations each nation can and ought to say what it wants and why it wants it.

The French wish to have a fleet which will enable them to ensure the security of their own shores and those of their colonies, and to control their lines of communication.

The total tonnage necessary to assume these responsibilities

Digitized by Google

naturally depends on the opposing forces. In international conferences, France has often enough made it clear what figure she considers necessary. This figure would give her, not the second but the fourth place among the navies of the world.

This total tonnage should next be divided into categories. France has always thought that she should remain at liberty to attribute to each category of ships the importance which she judged necessary according to the geographical and strategical conditions of their employment.

To wish to constitute each navy in accordance with a rigid common plan is to complicate considerably the problem of the limitation of armaments.

A navy which seeks first and foremost the protection of shores which open on land-locked seas will require small ships whose radius of action is a secondary quality.

Another navy, with oceanic interests, must build ships of a higher tonnage, able to face the open sea and to travel long distances without revictualling.

In England, criticisms have been made of the present composition of the French fleet. Why not let us be frank about this?

The criticisms have to do with the tonnage devoted by France to her submarine fleet. They have their source in the impression produced by the action of the German submarines in 1917, and in a misunderstanding of the intentions of the French nation.

For the French the submarine is an instrument which ensures at little cost the defence of both home and colonial shores against large vessels, since heavy artillery is powerless against it. French sailors repudiate the treacherous use which can be made of ships, whether on or under the sea or in the air, and they have given the firmest pledges in all that relates to the use of submarines.

It would be to misunderstand the French Navy to call it imperialist—this it cannot be, for France does not covet a square inch of foreign territory.

The French fleet ought not, therefore, to cause England the least anxiety, no more should the English fleet, which remains the foremost in the world, cause anxiety to France.

Quite the contrary: both should collaborate in the maintenance of order and security throughout the world.

X

Digitized by Google

INDEX

Age limit of ships, 21, 98
Aircraft-carriers, 16, 65 *et seq.*, 194
Air power, 34, 190 *et seq.*, 258
Armour, 199, 254
Australia, defence of, 257, 265, 266
Auxiliaries, mercantile, 89

Battleships:
  Abolition of, 240 *et seq.*
  Air attack, 199
  Restriction, 3
  Size of, 7, 15, 52 *et seq.*, 166, 226–230
Berry, Sir W., 70
Blockade, 91, 259
Bombs, aerial, 199, 201, 246, 250
Briand, M., 170

Caroline Islands, 272
Catapults for aircraft, 194
Coal, 114
Comparative strength of fleets, 300
Convoy, 73 *et seq.*, 133
Cruisers:
  Comparative strength, 177, 301
  Restriction, 3, 22, 69 *et seq.*, 73, 207, 210 *et seq.*
  Speed of, 75
Cruising radius, 255

Dartmouth, Royal Naval College, 139 *et seq.*
Destroyers, 31, 94 *et seq.*, 215
  age of, 98

East Indies Squadron, 265
Engines, 254
"Escalator" clause, 10, 101 *n.*, 211
Eyres-Monsell, Sir B., 142

Fleet Air Arm, 190 *et seq.*
France, 6, 14, 17, 210, 213, 282
  Cruisers, 80, 291
  Destroyers, 102, 216
  Sloops, 87
  Submarines, 14, 130, 233, 286
Fuel. *See* Oil Fuel.

Geneva Conference, 2, 31, 186, 207
Germany, 7, 285, 299
Global tonnage, 162, 232
Great Britain:
  Aircraft-carriers, 65 *et seq.*
  Battleships, 52 *et seq.*
  Cruisers, 10, 69, 73 *et seq.*, 173, 186, 207, 213
  Destroyers, 94 *et seq.*, 215
  Policy, 15
  Programmes, 4, 69, 73, 95, 111, 185, 214
  Submarines, 106
Guns, 61, 244, 252

Hall, Admiral S. S., 132
Harbours, air attacks on, 197
Hawaii, 13

Italy, 3, 7, 213, 216, 233, 239
  Battleships, 18, 297
  Cruisers, 294

Japan:
  Air force, 194
  Cruisers, 80
  Policy, 12, 16, 102, 157, 166, 234, 238, 268, 280
  Submarines, 131, 132
Jellicoe, Lord, 94, 119
Jutland, Battle of, 46

Limitation, wrong kind of, 204 *et seq.*

Digitized by Google

London Conference, 2, 9, 82, 86, 210

Marianne Islands, 272
Mediterranean, problem of, 14, 17
Merchant ships, 88
Mines, 67, 248, 249
Mussolini, Signor, 295

New Zealand, 265

Officers, naval, 136 *et seq.*
Oil fuel, 113 *et seq.*, 244, 302
  Sources, 126
  Storage, 123

Pacific Mandated Islands, 12, 272
Pacific Ocean, problems of 164, 265 *et seq.*
Parity, 12, 162, 170, 205
Personnel, 5, 173, 301
  Air, 195
Philippines, 8, 13
Piétri, M. F., 292
Policy, British naval, 5

Ratios, 12, 16
Replacement of ships, 21 *et seq.*
Richmond, Admiral Sir H., 29, 62, 150

Sarraut, M., 170
Seaborne commerce:
  Defence of, 38, 132, 196
  Extent of, 6
Shearer, Mr. W., 208
Shipbuilding:
  Cost of, 100
  Programmes, 4, 73, 95, 302
Ships:
  Adventure, 68
  Agamemnon, 54
  Amazon, 99
  Ambuscade, 99
  Aquitania, 90
  Arethusa, 18, 80
  Argonaut, 131
  Argus, 65, 192
  Audacieux, 102
  Audacious, 248
  Baden, 201
  Berengaria, 90
  Bittern, 88 *n.*

Ships—*continued.*
  Bremse, 68
  Broke, 104
  Brummer, 68
  Caerleon, 175
  Centurion, 201
  Chatham, 24
  Courageous, 65, 66, 192
  Deutschland, 255, 285
  Dreadnought, 52, 55
  Dunkerque, 18, 60, 253, 286
  Dupuy de Lome, 289
  Eagle, 65, 66, 192
  Eclipse, 102
  Emerald, 69
  Enterprise, 69
  Erebus, 248
  Exeter, 75
  Fubuki, 102
  Furious, 65, 66, 192
  Glorious, 65, 66, 192
  Good Hope, 173
  Hawkins, 69
  Hermes, 65, 192
  Hood, 65, 253
  Indefatigable, 70
  Invincible, 70
  King Edward VII, 52, 54
  Königsberg, 173
  Leander, 24, 74, 80
  Lord Nelson, 54, 66
  Majestic, 53
  Majestic (liner), 90
  Maryland, 253
  Minotaur, 79, 81
  Monmouth, 173
  Mauretania, 90
  Narwhal, 131
  Nautilus (U. S.), 26
  Nelson, 29, 201, 253
  Oberon, 110
  Pegasus, 173
  Phaeton, 276
  Polyphemus, 81
  Porpoise, 26
  Queen Mary, 70
  Rainbow, 110
  Renown, 70
  Repulse, 70
  Surcouf, 26, 130
  Swordfish, 26, 110
  Terror, 248, 265
  Thames, 26, 110

Digitized by Google

Ships—*continued.*
Tiger, 25
Tipperary, 104
U 139, 131
Vivaldi, 102
X 1, 109
York, 80
Sims, Admiral (U.S.N.), 107
Singapore, 124, 258, 266
Sloops, 86 *et seq.*
Special entry system, 143
Speed, 75, 101, 243
Submarines, 19, 104 *et seq.*, 216
French, 14, 26, 286
Italian, 14
Restriction, 3, 31, 163
Size of, 15, 26, 31, 109, 132
Thring, Capt. W. H., 266
Thurston, Sir G., 71
Tonnage allowance, 163, 232 *et seq.*
Torpedoes, 231, 248
Training and education, 138 *et seq.*

United States:
Air Force, 193
Policy, 7, 11, 213, 224
Programmes, 9, 225 *n.*

Washington Conference, 2, 155 *et seq.*, 205
Wester Wemyss, Lord, 109

Digitized by Google

Digitized by Google

THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

AN INITIAL FINE OF 25 CENTS
WILL BE ASSESSED FOR FAILURE TO RETURN THIS BOOK ON THE DATE DUE. THE PENALTY WILL INCREASE TO 50 CENTS ON THE FOURTH DAY AND TO $1.00 ON THE SEVENTH DAY OVERDUE.

JUL 31 1943

JUL 17 1947

23Aug WM'49

28Nov'51JP

29NOV'51LU

21 Mar 52 RI

JUN 19 1952 LU

IN STACKS

MAR 19 1957

REC'D LD

MAR 19 1957

LD 21-100m-7,'39(402s)

Digitized by Google

YC 62427

907863 H454
B9

THE UNIVERSITY OF CALIFORNIA LIBRARY

Digitized by Google